

**CREATIVE TEACHING IN HONG KONG PRIMARY SCHOOLS:**

**A STUDY OF TEACHERS' PERCEPTIONS**

Thesis submitted for the degree of

Doctor of Education

at the University of Leicester

BY

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April 2004

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## DECLARATION

I declare that this thesis represents my own work unless otherwise acknowledged in the text or by references. None of the work has been submitted for another degree in this or any other University.

There are approximately 57,000 words in the thesis. In consultation with my supervisor, Professor Paul Cooper, and with the approval of the Dean of Faculty, this extension to the word limit (50,000 words) is allowed.

Signed  \_\_\_\_\_  
CHAN, Shing Kun (April 2004)

## ABSTRACT

This qualitative study attempts to identify and analyse the perceptions of a group of local primary school teachers whose creative tasks led to their winning of the award of distinguished creative teachers in 1999. Guided by Cropley's creativity stages (1997), the investigation gathered and examined data by means of a two-phase approach, which began with a narrative analysis (Kainan, 1995) followed by an attributional study (Munton et. al., 1997). As a result of the narrative analysis, the creative teaching under study is found to be illustrative of the necessary qualities possessed by effective teachers. Furthermore, it coincides with the education aims officially advocated in Hong Kong. However, it is also found that the teachers have placed excessive emphasis on child-centred approaches and paid little attention to the value of the teacher-centred approaches. Based on the results of the narrative analysis, the attribution study comes to the findings that (i) teacher creativity is a process that can be described, learnt and fostered; (ii) the teacher participants play a critical role in initiating and sustaining the creative process while other external factors are only contributory in influence and insufficient to keep the process going; (iii) across the six creativity stages, the perceived causes affecting the creative practices are regarded as mostly stable and generally specific, but their internality varies. The study concludes that having taken into consideration the influences caused by a variety of contextual constraints, the level of creativity, which is an outcome of adaptation, exhibited by the teachers is low but desirable. Since the constraints exist in various contexts, suggestions for fostering teacher creativity by tackling the constraints are offered at three different levels. Finally, Cropley's framework of creativity stages is found to suit the present study well and is thus recommended for similar enquiries.

**KEY WORDS**

**teacher creativity, perception, perceived cause**

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**DEDICATION**

To my wife, Mary

who

Stands by me

with love and support

through the good and bad times.

## ACKNOWLEDGEMENTS

Without the support of many people, I could not have accomplished this thesis. The greatest source of strength came from my family. I wish to thank my parents, my wife and my children for their encouragement and faith that gave me the will to pursue my educational goals. In addition, I am thankful to my brother-in-law, Charles, who cared enough to listen and prodded me into action gently at the right time.

My doctoral study could not have been undertaken if not for the inspiration and professional support of the tutors at the University, Professor Maurice Galton, and Dr. Martin Cortazzi and many others. Needless to say, the support and expert advice given by Professor Paul Cooper to my thesis writing is gratefully acknowledged. To all these people, I am grateful for my professional growth.

The enthusiastic support provided by the Hong Kong Institute of Education meant a great deal to me. I especially want to thank Professor Philip Moore, Dr. P.K. Chan, Dr. S.W. Wu, Dr. C.K. Chan, Mr. P.L. Lee, Mr. K.L. Lau, Mr. C.W. Li, Ms. M.Y. Siu, Ms. S.M. Ho and Ms. L.M. Poon for their contribution of time and concern to this study and motivating me to explore ways for the betterment of pupils' learning. In addition, I would like to acknowledge and express my appreciation to Dr. M.Y. Cheng, Mr. H. C. Lee and Mr. S.P. Kwan, my committee co-members of the Creative Teaching Campaign, who were the catalyst for the promotion of creative teaching in local primary schools.

I also wish to thank the teacher participants and head teachers for letting me

share their innermost professional thoughts and making this study possible through their unstinting participation. I appreciate the opportunity to learn with and from them. The friendship that we have built up is most valuable. In addition, I would like to express my sincere thanks to my students for their interest and enthusiasm shown in my study.

Many others have assisted me throughout the years of the study. Many people, too numerous to name, share my experience by providing me with inspiration, encouragement, and support. To all of you, my heartfelt thanks.

## **CHAPTER ONE**

### **INTRODUCTION**

The introductory chapter is outlined below:

1. **Background**
  - 1.1 Pursuit of creative teaching
  - 1.2 Challenges of creative teaching
  - 1.3 Excellence of the selected creative teachers
2. **Purpose of study**
  - 2.1 The two phases of study
  - 2.2 The research questions
3. **Scope of study**
4. **Significance of research**
5. **Definitions of key terms**
  - 5.1 Perception
  - 5.2 Belief
  - 5.3 Practice
  - 5.4 Cause and reason

#### **1. Background**

##### **1.1 Pursuit of creative teaching**

This study intends to explore the teachers' perceptions of teacher creativity. It focuses on the teaching that manifests the creativity of teachers. The term "creative teaching" is used here to highlight the application of teacher creativity in the aspects of teaching. The study was inspired by an officially funded campaign for

local schools - the “Creative Teaching Campaign for Primary Teachers of Hong Kong”. This campaign was one of the Quality Education Fund projects launched in 1999-2002 and has received HK\$1,245,700 from the Director of Education Incorporated<sup>1</sup>. Most notably, it resulted in twenty-five outstandingly creative teachers being selected, making it possible for this study to explore their perceptions of creative teaching.

In Hong Kong, government officials advocated enhancement of teacher creativity on many public occasions. For instance, the Chief Executive, Mr. Tung Chee Hwa stressed that teachers of the 21st Century should have an immense and extensive knowledge, independent thinking, creativity and enthusiasm (M2 PressWIRE, 1998). Furthermore, official documents (Hong Kong Curriculum Development Council, 2001; Hong Kong Education Commission, 2000) also encouraged teachers to create an inspiring classroom environment and use flexible teaching strategies in class teaching.

## 1.2 Challenges of creative teaching

With the official advocacy coexist constraints that may suffocate teacher creativity in class teaching. For instance, there is the human constraint that high percentages of unqualified teachers are found across various teaching subjects. Many teachers simply do not have the academic qualification and teacher training for the subjects taught<sup>2</sup>. To cope with this lack of teacher knowledge in the classrooms, worksheets, curriculum packages and computer-assisted learning packages have been extensively used<sup>3</sup>. These packages usually supply not only the prescribed procedure of teaching, but also the necessary teaching equipment and assessment sheets. Teachers are therefore not expected to deviate their teaching

from what has been prescribed by the curriculum packages. As they are rarely involved in the package development process and they do not have the qualification or teacher knowledge to evaluate and make adjustment to the prescribed materials, it is only natural for them to adhere to these packages rigidly. Equally disturbing is the hindrance caused by other non-human constraints like the exam-oriented system, overcrowded working environment and inadequate contact time with pupils (Lee et al., 1999; Morris et al., 1996; Tang, 1994). These constraints would constrict teachers' intentions to adopt more flexible approaches and teach creatively in their classrooms.

The above phenomena indicate that the local government's demand for changes in teachers' practices is counteracted by numerous constraints existing in the education system. Under such circumstances many Hong Kong teachers tend to follow routines, and become insensitive to changes and indifferent to creative teaching.

### 1.3 Excellence of the selected creative teachers

In fact, Hong Kong teachers have for years taught in formalized methods following a set of syllabuses (Green Paper, 1980; Llewellyn et al., 1982). Recent studies showed that the formalized curriculum and didactic methods are still prevalent among local primary schools (Morris et al., 1996; Law-Fan, 1999; the Education Commission, 2000; Lee et al., 2001), and hinted at teachers' lack of courage and commitment to change the conventional approach. Under these circumstances, it is most encouraging to find twenty-five teachers being honoured as outstandingly creative in an officially funded campaign. They have adopted flexible approaches and at the same time have attained high effectiveness in their

teaching. Their creative teaching has filled the classroom with curiosity, excitement and resulted in genuine pupil learning. Although these teachers have faced the same constraints in the education system and have been through school traditions like other teachers, their practices of teaching do not conform to typical class teaching. They have deviated from the conventional, pushed themselves beyond existing boundaries and adopted more flexible approaches to teach. Therefore, it would be interesting and worthwhile to know how and why their teaching strategies are planned, implemented and evaluated as outstandingly creative.

## **2. Purpose of study**

### **2.1 The two phases of study**

This research intends to identify and analyze teachers' perceptions in relation to their creative teaching in Hong Kong primary schools. To locate these perceptions, the research is divided into two major phases.

The Phase One study makes use of narratives submitted by twenty-five outstandingly creative teachers selected as a result of the above-mentioned campaign. It aims to identify and interpret teachers' perceptions of creative teaching in local primary schools. How such perceptions are mediated by educational contexts in the local setting is explicated, too.

The Phase Two study is to follow up the Phase One investigation. It intends to gain a deeper understanding of the perceptions of creative teachers. Semi-structured interviews with the same cohort of creative teachers are arranged to collect data for attributional analysis. This part relates the teachers' perceptions

about causes to their practice of creative teaching in school.

## 2.2 The research questions

Throughout both phases, the following questions have guided the investigation:

- (1) How do teachers describe their creative teaching in the classroom?
- (2) What are teachers' perceptions regarding the nature of creative teaching?
- (3) How is creative teaching planned, implemented and evaluated?
- (4) What are teachers' perceptions about the causes of their practice of creative teaching?
- (5) How do teachers' causal perceptions affect their practice of creative teaching?

## 3. **Scope of the study**

The present research is a study of teacher creativity in Hong Kong primary schools. It examines the teaching of the selected teachers whereas the development of pupil creativity or more specifically the teaching to foster pupils' creativity is not within the scope of this study. The investigation also makes no claim to depicting teachers' actual practice of creative teaching, but rather it intends to lay out their perceptions about the practices. It is aware that there may be possible influence of subject-specific (e.g. teaching Mathematics versus teaching English) and grade-specific (e.g. teaching lower grade-levels versus teaching upper grade-levels) factors on teachers' perceptions of creative teaching. Nevertheless, the present study focuses on the commonality of such perceptions of creativity within the domain of teaching rather than their variation. Hence, it is unnecessary

to consider the influence of these factors for the purpose of this study. Furthermore, it is noted that what has been described in the narratives and the interviews may not exactly coincide with what these creative teachers think and do in their everyday classrooms. Nor does it provide a complete representation of the majority of creative teachers' classroom life in Hong Kong. Nevertheless, data acquired from the outstanding creative teachers can exemplify the chosen teachers' perceptions of their classroom practice; and specifically, portray their perceptions of creative teaching in the local setting. More importantly, such perceptions are the indicator of beliefs that facilitate or hinder their practice of creative teaching.

#### **4. Significance of the research**

In an era when children are used to learning from a host of media like television, video games, computer programmes and the Internet, teachers often find previously well-tried classroom methods incapable of holding pupils' attention and interest. Furthermore, the curricular reforms and other external challenges presented by a fast changing world often raise classroom problems that teachers have no prior experience in solving. Consequently, they realize that the traditional methods of teaching are no longer sufficient or effective, and that creative solutions are necessary. Also propelled by fears of being left behind, they choose to change and be creative in their teaching. It is believed that research into the different aspects of teacher creativity has the potential to help teachers to teach with more excitement, effectiveness and satisfaction.

As the majority of Hong Kong teachers are still adopting didactic methods of teaching, the twenty-five selected teachers' unconventional approaches, which the

concerned teachers and pupils alike find interesting, effective and enjoyable, clearly merits a close study. Needless to say, these selected teachers' courage, determination and efforts to teach creatively should be duly recognized; their capabilities to have the creative tasks clearly communicated to and successfully validated by field members are also commendable. But more noteworthy is the promise that these teachers may possess some special personal attributes and/or may have availed themselves of certain particular contexts that enable them to break away from routines and come up with some creative tasks for class teaching. However, such personal attributes and contexts are far from understood and need to be explored in the present study.

This study seeks to enrich the understanding of teacher creativity and ultimately provide a collection of ideas and inspirations that would lead to the formulation of working hypotheses about creative teaching in local primary classrooms. Thus, the significance of this investigation lies in its contribution to understanding the nature of teacher creativity as well as increasing awareness among teachers and educators of the personal and contextual factors that affect, both positively and negatively, creative teaching in the local setting. In addition, this thesis is meant to be accessed easily by interested teachers, education officials and decision makers who can then make their own interpretations of the extent to which teacher creativity was exhibited through the perceptions held by some outstanding teacher participants. Based on these interpretations, they may be able to contribute to creative teaching in their own ways. Both the increased understanding of the subject and easier access to this thesis by interested parties would make the concept of creative teaching less elusive and boost the users' confidence in its application.

## **5. Definitions of key terms**

5.1 Perception and causal perception – Perception is the interpretation of the evidence of our senses in our constant attempt to find meaning in the environment (Kagan et al., 1980, p.301). Namely, it is a mental representation resulting from the awareness of environmental elements through physical sensation. Slavin (1991) argued that “perception of stimuli is not straightforward as it is influenced by our mental state, past experience, knowledge, motivations and many other factors” (p.132). In the present two-phase study, the perceptions of the creative teachers are the major focus. These teachers organize and interpret their sensory impressions gained from classrooms in their constant attempt to find meanings in their classroom lives. The Phase One study explores their perceptions of creative teaching in general and the Phase Two study deals particularly with their perceptions of causality. The term “causal perceptions” is used to stand for these participants’ perceived causes located in the Phase Two study.

5.2 Belief - is a set of conceptual representations to guide its holder’s personal thought and action (Harvey, 1986). Beliefs may be informal, not validated and sometimes incongruent with one’s practices; yet they are found to be the “personal foundations on which an individual’s professional practice is built” (Cole, 1990, p.203). Kagan (1990) defined teacher belief as “highly personal ways in which a teacher understands classrooms, students, the nature of learning, teacher’s role in a classroom, and the goals of education” (p.432). In the present study, teachers will describe their beliefs in creative teaching through personal narratives and interviews. In other words, the current data on teachers’ beliefs are, in fact, teachers’ perceptions of their beliefs.

5.3 Practice and creative practice – Practice is the usual way of doing something with repeated or customary actions.<sup>4</sup> Therefore, “practice of teaching” can be defined as a teacher’s routinized performance observed in the teaching and learning processes. Four major aspects in the practice of teaching have been raised by Alexander (1992, 1995) and will be presented in the chapter on literature review. In this thesis, “creative practice” refers to the practice of teaching that the teacher participant performed in his/her classroom.

5.4 Creative person, process, product and press (the creative 4Ps) – The present study investigates the creative teaching of a selected group of local primary school teachers. The term “creative teaching” refers to the phenomena of creativity exhibited by these teachers in their practice of teaching. Rhodes (1961) suggested that creativity study comprises four parts: understanding the traits, attributes or characteristics of the creative person; describing the operations or stages of thinking used in the creative process; identifying the qualities and outcomes of creative products; and examining the nature of its context within the creative press (or environment). Operationally, descriptions of creative teaching in this thesis may contain one or more parts of the abovementioned 4Ps: creative person (the selected teacher participant), creative process (Cropley’s creativity stages<sup>5</sup>), creative product (the creative task or event submitted and validated in the Hong Kong Creative Teaching Campaign) and creative press (school and outside-school contexts).

5.5 Cause & reason - Munton et al. (1999) admitted that these two terms are not easily distinguishable from each other and maintained that in attributional studies “any distinction that might exist is of no great significance” (p.8). In the present

study, Munton et al.'s approach to attributional analysis is to be adopted and hence their notion of making no distinction between the meanings of "cause" and "reason" is to be followed accordingly.

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<sup>1</sup> This researcher is one of the four organizers of the campaign. However, this thesis is the researcher's personal endeavour to complete his doctoral study.

<sup>2</sup> For instance, in 1996, the total percentages of untrained and non-specialized teachers in Chinese was 13%, English 56%, Math 16%, Music 60%, Art and Craft 74% & P.E. 33%; till 1999, the respective percentages for Chinese was 12%, English 52%, Math 13%, Music 59%, Art and Craft 72% & P.E. 27% (Hong Kong Teacher Surveys, 2000).

<sup>3</sup> A number of learning packages have been produced by the Department of Education, ICAC and China Light of Power, etc.

<sup>4</sup> Merriam-Webster's Collegiate Dictionary

<sup>5</sup> See Review of Literature for details.

## **CHAPTER TWO**

### **REVIEW OF LITERATURE**

The present study intends to explore teachers' perceptions of creative teaching in Hong Kong primary schools and then to locate the perceptions of causality of such creative events. Therefore, literature related to creativity, teaching and causal dimensions is reviewed. The outline is listed below:

1. Research on Creativity
  - 1.1 Process as a focus to investigate creative teaching
  - 1.2 A stage approach to help understand the creative process
  - 1.3 Cropley's six creativity stages and other related studies
2. Causal attribution and its dimensions
  - 2.1 Rationale for studying teachers' perceptions of causality
  - 2.2 Nature of causal attributions
  - 2.3 Development of causal dimensions
  - 2.4 Biases in the attributional process
  - 2.5 Studies of attributions in school contexts
3. Class teaching and its context
  - 3.1 Rationale for reviewing class teaching and its context
  - 3.2 Nature of teaching
  - 3.3 Findings on effective teaching
  - 3.4 Importance of contextual influences
  - 3.5 Aims of primary schooling in Hong Kong
  - 3.6 Context at individual level
  - 3.7 Context at interpersonal level
  - 3.8 Context at organizational level
4. Some unanswered questions
5. Chapter summary

## 1. Research on Creativity

### 1.1 Process as a focus to investigate creative teaching

Research on creativity in the past decades has already attempted to define the concept with respect to its process and product (Stein, 1953; Harmon, 1956), intellectual factors of persons (Guilford, 1959) and persons in relation to environmental stimuli (Taylor, 1988). Later, advocates like Sternberg (1988), Davis (1992), Yau (1995) and Runco (1997) all shared the view that it is convenient and conventional to discuss creativity in terms of the four P's: the creative person, the creative product, the creative process and the creative place. The present review follows Torrance's approach (1965, 1988) that begins with a process-oriented definition of creativity. He argued that when "process" is chosen as a focus, the inquiry can naturally move forward to locate the kind of persons and environments that will facilitate the process and, subsequently, the kind of products to be derived from successful operation of the process. Similar emphasis on the "process" aspect is also found in teaching. Britzman (1991) maintained that teaching is always a process of becoming, never a finished product, and in this process the "teacher is continually shaping and being shaped by the dynamics of social practice, social structure, and history" (p.32). In other words, teaching by its nature is a process. It is always an ever-changing and interactive process between the teacher and pupils. Therefore, the "process" is more fundamental to the study of teaching than the "outcome" or other contextual factors. As a result, it deserves more attention in the search for the meaning of creative teaching. The following paragraphs are to review a variety of the studies on the creative process.

Tarlow (1996) mentioned that "creativity is a maturational process that unfolds through a combination of inborn talent and exposure to encouragement, opportunities, and respected role models" (p.10). Such a definition implies that the creative process is developmental and is affected by the inherent as well as external attributes. Runco (1993a) also suggested that creativity is a highly interactive complex or family of behaviours, skills and tendencies with its products resulting from dynamically and continuously evolving processes.

## 1.2 A stage approach to the creative process

In order to have a clearer understanding of the creative process, a stage approach is adopted. Such an approach, on the one hand, helps to clarify the interactions among cognitive, affective and psychosocial elements; and on the other hand avoids neglecting or over-emphasizing the happening and function of particular stages (Cromptley, 1997).

In the early nineties, Wallas (1926) postulated a four-stage model of cognitive processes that yields creative products:

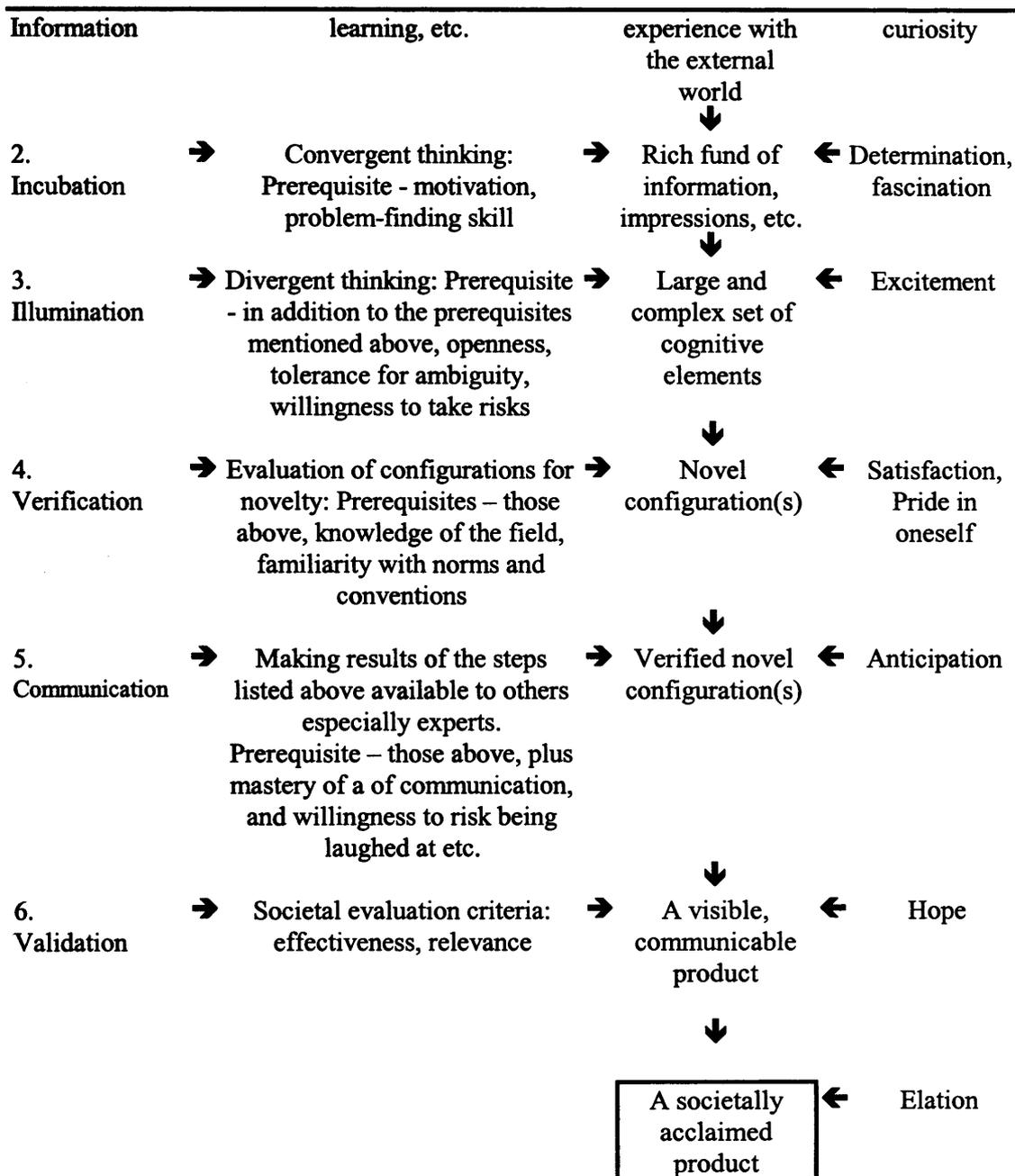
- (1) Preparation - acquiring a rich, integrated knowledge base
- (2) Incubation - unconscious mental work
- (3) Illumination - a sudden reorganization of knowledge resulting in insight, and
- (4) Verification - a systematic evaluation and refinement of the insight.

Torrance (1988) asserted that the above model is the basis for most of the creative thinking training programmes. This framework begins with purposeful preparation and ends with critical verification, which suggests that analytical thinking is needed in the creative process. However, the inclusion of incubation followed by sudden illumination may imply that creative thinking is a subconscious mental process that cannot be directed.

Later, Cromptley (1997) extended Wallas's four-stage model by adding two more stages - communication and social validation. His first stage (Information) is similar to Wallas's Preparation Stage. However, he enriched each individual stage with related cognitive, affective, motivational and psychosocial factors. The interplay of the six stages and such factors are charted as follows:

Table 1 Cromptley's Creativity Stages (Reproduced from Cromptley, 1997, p.99)

Stages	Cognitive / psychosocial factors	Product	Affective factors
1.	→ Perception, remembering,	→ Many-sided	← Interest,



Accordingly, Cropley concluded that the creator adheres to a paradigm enabling him/her to:

1. Be exposed to a rich variety of information with increased interest and desire for more
2. Re-evaluate the problem and tackle it with an expanded or enriched design
3. Attend to peripheral aspects of the information in question
4. Be eager to try the unexpected and search for the novel
5. Have the courage to present the product

## 6. Receive recognition and experience the satisfaction of creative achievement

Cropley's creativity stages have not only enriched Wallas's proposal but also provided a succinct yet multi-faceted procedure-like framework. Furthermore, the last three stages of this model – verification, communication and validation fit well with the selection procedures of teacher participants under study. Therefore, this model is believed to be capable of acting as stepping-stones towards understanding the process of creative teaching. This framework will again be referred to in the method chapter.

### 1.3 Cropley's six creativity stages and other related studies

Cropley's framework has depicted an overview of the creative process in relation to the various cognitive, psychosocial and affective factors<sup>1</sup>. The paragraphs below will furnish individual stages with other relevant research findings on areas concerning the 4Ps of creativity - creative persons, creative products, creative process and creative places.

Cropley's stage 1 (Information) and stage 2 (Incubation) have highlighted the need to be knowledgeable and capable of recognizing, discovering, or inventing problems. Similarly, Langley et al. (1986) and Simonton (1988) verified empirically that creative persons should possess a thorough knowledge of the field. Also, Tardif et al. (1988) maintained that a creative person goes through systematic cognitive processes emphasizing the skills of problem finding which involve:

1. Recognizing the existence of a problem;
2. Producing numerous relevant ideas;
3. Evaluating the above ideas; and
4. Drawing appropriate conclusions.

Therefore, a potential creator, in addition to the possession of a profound wealth of knowledge, must be able to discern from existing information, the connections, overlaps, similarities and logical implications before s/he moves on to find and

formulate problems. Demonstration of all these abilities leads to fruitful convergent thinking in creativity stage 2 (incubation).

Sequel to stage 2, stage 3 (Illumination) emphasizes the ability to develop information from some given stimulus<sup>2</sup> as well as the ability to go off in different directions in dealing with a problem<sup>3</sup>. Creative people will go through cognitive processes that proceed beyond obvious and conventional associations between existing knowledge and stimuli. They will make surprising associations<sup>4</sup> in order to illuminate novel configurations. McKim (1972) argued that the creators have the readiness to accept new information or to view old information from a new perspective. They can shift viewpoints and avoid from holding a one-sided, stereotyped perspective. Similarly, researchers like Hentschel & Schneider (1986), and Smith et al. (1997) also claimed that creative people are more flexible, less prone to immediate stimuli and direct associations. They are more inclined to deviate from consensus interpretations of the context. In this respect, flexibility is a key attribute for creators in stage 3 to illuminate obscurities surrounding a novel configuration.

In creativity stage 4 (verification), a new configuration has already been produced with its conception of novelty to be clarified and evaluated. Such configurations can be “behaviours, performances, ideas, things and all other kinds of outputs and types of expressions” (Taylor, 1988, p.104). Similarly, Cropley (1999) suggested that a creative product can take the form of a work of art, a machine, a production process, a solution or a prototype of knowledge. To verify and assess creative products, Mumford and Gustafson (1988) proposed two categories of creativity – “minor creativity” (the novel application of the already known) and “major creativity” (development of new principles). Similarly, Puccio (1998, p.85) claimed that the product can be “an original modification to an existing idea or a new approach that radically departs from prevailing thought”. To rank genuine creativity and other forms of freshness, Taylor (1975) postulated five levels of creativity:

1. **Expressive spontaneity** – It involves the uninhibited production of ideas as in the spontaneous drawings of children, everyday pretend games or casual suggestions in adult conversations. The novelty is produced in the form of a concrete product or an observable behaviour and is probably novel for the producer only.
2. **Technical creativity**<sup>5</sup> - It involves unusual mastery of knowledge, exceptional skill, method, tools of a trade, instruments etc. as in artistic or scientific projects to enhance the precision, efficiency or utility value of an existing product, method or idea – without changing its basic functions.
3. **Inventive creativity** – It is an application of the already known in a novel way displaying ingenuity with materials, methods, and techniques; namely new functions are envisaged. The novelty in both levels 2 & 3 is still based on the application of what already exists.
4. **Innovative creativity** – The new ideas are generated from known principles of paradigms with improvement gained through modification involving contextualizing skills or standards.
5. **Emergent creativity** - The development of new principles or paradigms upon which new schools, movements, and the like can flourish. The novelty in levels 4 & 5 produces variability that extends beyond or changes existing ways of symbolizing an area of knowledge.

Obviously, expressive creativity is an everyday phenomenon. Higher levels of creativity are expected to be located in the teacher participants of the present study. The following paragraphs will proceed to look at Cropley's creativity stages 5 (communication) and 6 (validation) and review how creativity is considered in social settings.

Stage 5 calls for effective communication of the creative product to the community of people in related fields. Social recognition must be gained from those who are actively involved in the same area of creative endeavour (Csikszentmihalyi, 1988; Nakamura & Csikszentmihalyi, 2001). However, the knowledge of the field often lags behind that of the creator. It is often

crowd-defying in trying to gain acceptance of the creative product by members of the field. Nevertheless, such challenges can be good intrinsic motivators for creation (Amabile, 1996). All in all, Simonton (1988b) argued that creativity demands overt exercise of personal influence to attain social acceptance such that “the potential appreciators” can restructure their thinking habits in a similar manner as experienced by the “originator”. In other words, the originators must express their ideas and work in a manner that can convince the appreciators of their value. To achieve this social acceptance, Simonton suggested four requirements:

1. **Mental elements** - each member of the community, both the originator and the appreciators, must have similar mental elements such as a shared body of facts, experiences, techniques, concerns, values, emotions, and problems.
2. **Need** - a need must exist among the potential appreciators who are willing to attune their minds to the originator’s experience.
3. **Configuration** - a meaningful configuration like a journal article, an essay, a painting, a model, a songs or a poem, just to name a few of the countless possibilities, has to be devised and made available to the potential appreciators.
4. **Translation** – the originator must successfully translate and present the initial conception such that the appreciators can understand and attain similar experience.

When the creators’ unconventional products are crowd defying, Simonton’s suggestions may be taken to facilitate communication. These four requirements can serve as guidelines to help devise proper strategies such that the creators can successfully communicate their ideas to their colleagues, audiences and so on before their novelty can be validated as genuine creativity in the last creativity stage.

Cropley’s stage 6 deals with the validation of creative products. Gardner alleged that “creativity is inherently a communal or cultural judgment” (1993, p.36). In other words, this is a stage for societal evaluation and judgment. The creator

must produce some configurations such that others are convinced of their value. To validate creativity, Bruner (1967) claimed that it causes “effective surprise” to the observers. Davis (1992) maintained that such judgments usually call for originality, practicality and social worth. Other researches indicated that the central elements of creativity include “novelty” (Morgan, 1953), “relevance and effectiveness” (Tardif et al. 1988) and “ethicality” (Eisenman, 1991). Furthermore, Puccio (1998, p.85) indicated that “the overall creativity of a product increases as novelty and usefulness move from the individual level to group and from group to society”. The above researchers suggested that creativity is a social phenomenon which evokes surprise from people, enhances the effectiveness of some relevant tasks or particular groups of people and finally, has a positive impact on social attitudes and values.

However, surprise can be threatening. There is always a tension between conventionality and creativity, especially when an individual’s creation is to be validated by the public. The social regulatory functions of a group or a society tend to work against the unconventional and the creative, which are seen as threats to the existing social order. Sometimes, the acceptance of a newly created product is slow to emerge and the creative individual must be emotionally resilient. More discussion on the interactions of creative individuals with the different levels of context will be presented in later sections

So far the conceptions of creativity have been centred on the framework of Cropley’s creativity stages and furnished with a review of the relevant literature on creative process, creative person, creative product and creative place. Such review serves to provide hints to locate creativity in “creative teaching” – the theme of the present investigation.

## **2. Causal attribution and its dimensions**

### **2.1 Rationale for studying teachers’ perceptions of causality**

This study is concerned with teachers' perceptions of creative teaching, as well as their perceptions about the causes of such practice in teaching. Prior to the review of literature on causal attribution and their dimensions, the rationale for studying teachers' perceptions of causality needs to be presented.

Pittman & Pittman (1980) argued that people are inclined to seek causes for happenings around them in order to have a better control of the environment. They maintained that with accurate perceptions about the causes of their behaviour, individuals can adapt to similar events and thus control those events better in the future. By the same notion, in class teaching, teachers need to manage their working environment. To do so, they have to think about the causes and the respective outcomes in the course of interpreting classroom events. However, teachers nowadays tend to be preoccupied with routines and duties such that they may not have enough time to consciously reflect on their practices. This lack of reflection is also in line with Langer's claim (1978) that people are not always consciously seeking explanations. In fact, Galton et al. (1999) commented that teaching is very resistant to change. They argued that any change requires conscious effort on the part of teachers to analyse and even criticize their own teaching and related activities. Accordingly, a deliberate inclination to find the causes of the classroom happenings can be a good practice if teachers want to improve their motivation and performance. It could be argued that teachers, who should be reflective, ought to locate the causality of classroom practice and then act according to their perceptions of such causal relationships. This kind of reflective experience can provide the basis for teachers' future growth and improvement. In a word, the researcher believes that teachers' perceptions of causality are influential to teachers' work and deserve particular attention.

The above section has described the rationale for studying teachers' causal perceptions of the practice of teaching. Accordingly, the present study on the teachers' causal perceptions of the creative practice is contributive to a deeper understanding of the issue. To meet this end, an attributional approach is thought to be practical and applicable (Hayes, 1997; Munton et al, 1999; Stratton et al, 1988). The following paragraphs will mention (1) the nature of causal attributions, (2) the

development of causal dimensions and (3) the biases in the attributional process in order to provide a theoretical foundation for the subsequent method chapter.

## 2.2 Nature of causal attributions

Causal attributions are explanations that individuals use to understand and maintain effective control in their environment. They concern everyday explanations and perceptions of the causes of behaviour that people subjectively produce when they encounter novel, important or unusual behaviour and events. Munton et al. (1999, p.6) defined an attribution as “an expression of the way a person thinks about the relationship between a cause and an outcome” and proposed that it answers the question “Why?” For example, “I failed the exam because I’m stupid” qualifies as an attribution. Another statement “I’m stupid so I failed the exam” is an equivalent attribution bonded by a different link. The cause elements of these attributions are “stupidity” and the outcome elements are “exam failures”. Furthermore, they answer the question “Why did you fail the exam?”.

It must be aware that an attribution serves not to establish an objective cause-effect link between events but rather describes how individuals make sense of their environment and experience. The significance of attributional studies lies in the fact that the causes attributed to behaviour will influence subsequent thought and behaviour (Weiner, 1973). This concept has been studied over time by many researchers (Heider, 1958; Jones and Davis, 1965; Kelley, 1967; Weiner, 1979; Abramson, Garber & Seligman 1980). A more in-depth examination of the concept is beyond the scope of this inquiry. The following section first reviews the development of causal dimensions and then the formulating of the internal-external, stable-unstable and global-specific dimensions for the present study.

## 2.3 The development of causal dimensions

An attribution can be described and coded by using different dimensions. Each dimension provides information about a certain aspect of a causal perception. On the whole, causal dimensions are categorisations created to deal with an infinite

number of causal perceptions that are generated as explanations for the outcomes of events. These dimensions give information about some particular aspects of a causal perception. In other words, they prescribe a conceptual framework to categorize the countless causal perceptions so that comparisons among them are made possible. Both theory and research in applied fields support the use of this dimensional structure to explain the psychological consequences of attributions such as motivation and emotion (Weiner, 1986), learned helplessness (Peterson & Seligman, 1984), consumer behaviour (Folkes, 1988) and family therapy (Munton et al, 1999).

Research on the dimensionality of attributions establishes five major categories, including locus (internal or external to the person), stability (stable or variable over time), globality (general or situation-specific), controllability (changeable or unchangeable by one's actions) and universality (wide ranging or uniquely personal). Each dimension has opposite poles in a bipolar locus-of-continuum. The more an individual attributes causes to one pole, the less the individual attributes to another. In the present study, three causal dimensions are chosen because of their appropriateness in describing the perceived causes referred to by the teacher participants. The development of these dimensions is now elaborated below whereas the operational definitions of the dimensions will be given in the method chapter.

#### (1) The internal-external dimension

Heider (1958) divided causes into two categories. He suggested that the basic element of a cause an individual proposes to account for an outcome is something within the person or without the person. In other words, a cause can be ascribed to internal factors like someone's personal characteristics (e.g., ability, effort, intention, disposition) or to external matters (e.g., task-related situation, luck). As a bipolar continuum, the more a person attributes causes to internal factors, the less the person attributes to external factors. Furthermore, attribution can have a significant impact on the emotional outcome of an event (Weiner, 1985). For instance on successes, internal causes lead to feelings of confidence and pride,

whereas external causes result in gratitude.

## (2) The stable-unstable dimension

Weiner (1973) supported the internal-external dimension but went one step further to suggest another attributional dimension – stable or unstable. His framework is based on the logic that other than internal-external dimension, a cause could also be seen as relatively stable or unstable. He argued that individual's thoughts and future actions are influenced by his/her own assessment of ability (stable and internal) and effort (unstable and internal), the perceived difficulty of the task (external and stable), and anticipated luck (external and unstable). An outcome ascribed to stable causes has more influence than does on attributed to variable cause. For instance, when the perceived causes of outcomes are ascribable to stable factors like ability or task difficulty, an individual will be reluctant to change and the outcomes will be consistent over time. In sum, the stable-unstable dimension can be used to explain an individual's past performance and to predict his/her expectations of the chance of success in tackling similar tasks.

## (3) The global-specific dimension

The global-specific dimension was derived from the reformulated learned helplessness model of depression (Abramson et al, 1980). These researchers intended to differentiate between helplessness deficits that can be rather general and those that appear to be quite specific. They argued that people might perceive a particular area of their lives as helpless or alternatively, might generalize all aspects of their lives as helpless. Specifically, there are individuals known to have attributed causes globally when they experience failure in only one specific situation due to certain causes and develop generalized perceptions that everything they do will fail. Therefore, globality is a dimension about the extent to which one holds consistent perception of causality across situations. In sum, causes regarded as global are those perceived as having an impact on a wide range of situations, while specific causes will only influence a limited number of situations.

The above discussion has looked at the definitions and the ways in which the

attributional dimensions have evolved. However, this process of evolution continues and gives attributional causes phenomenological meanings. Such a phenomenon is discussed below.

#### (4) Phenomenological meanings of attributional causes

Ronis et al. (1983) and Weiner (1986) admitted that the link between a particular attribution and its dimension can be arguable. For example, the personal trait “ability” such as intelligence seen previously as stable may be viewed as unstable if it is perceived that learning is possible; “effort”, seen as an unstable element (e.g. I’m lazy) may actually be perceived as a stable characteristic. In other words, the individual’s phenomenological meanings of attributional causes may change the theoretical properties of the dimensions. Consequently, Munton et al. (1999) asserted that the dimensionality of attributions should be determined from the perspectives of the person who is making the attribution. Furthermore, they suggested “definitions [of the dimensions] may change according to the context in which attributional research takes place” (p.18). These notions will be revisited in the method chapter on attributional analysis of the present study. The next subject to examine is the biases in the attribution process.

#### 2.4 The biases in the attributional process

Kelley (1967, p.219) acknowledged that “attribution processes are subject to error”. Two common biases, fundamental attribution error and self-serving bias, which are relevant to the present study, are raised below:

In the “fundamental attribution error”, internal attributions are held to be relatively more important than external attributions ... and the “self-serving” bias predicts that attributions for one’s own success are more internal than external (self-enhancing) while attributions for failure are more external than internal (self-protecting). (Hewstone, 1996, p.57-8)

As far as creative behaviours are concerned, Kasof (1995, p.311) maintained that

“throughout history, laypeople and scientists alike have tended to attribute creative behaviour to dispositional rather than situational causes”. He further explained that since self-serving bias leads to attributing desirable outcomes to stable, global causes within oneself, and therefore, creators “should be motivated to attribute their creative behaviour to dispositional causes rather than situational or unstable causes” (ibid, p.339). However, Sternberg (1995) criticized Kasof’s explanation of creativity as “a false dichotomy between dispositional and situational views of creativity” (p.368). Similarly, Amabile (1995, p.423) argued that Kasof’s comments “over-attribute the attributional bias toward dispositions”. Nevertheless, she admitted that Kasof’s study on the attributional approach to creativity serves to call for a balance between the historical over-concern with creators’ dispositions and environmental influences.

Contrary to Kasof’s argument (1995), the self-serving bias where success is more likely to be attributed to dispositions does not seem to appear in the Chinese employees<sup>6</sup> (Munton et al, 1999). They claimed the Chinese typically show a “modesty bias” and describe the causes of their own successful work performance to situational causes such as the contribution of other team members or their managers. More discussion on such kind of cultural influence will be presented in later sections on the three levels of context at work.

## 2.5 Studies of attributions in school contexts

Studies of attributions within school contexts have tended to concentrate on students’ attributions and their performance (Weiner, 1985). There are also studies of teachers’ attributions in relation to students’ performance (Hall, Villeme & Burley, 1989) and also on their own classroom behaviour (Gutkin & Hickman, 1988). However, to the researcher’s knowledge, published material concerning teachers’ attributions on their creative teaching is rare.

In Hong Kong, much attribution research has involved Chinese students as subjects for investigation and has drawn on Weiner’s attributional theory of achievement motivation (Crittenden, 1996). Studies found that students of all ages perceived effort and study skill as the most important causes of performance (Hau,

1992; Hau & Salili, 1990). Nevertheless, Crittenden (1996) cautioned researchers not to apply findings generalized from students' attributions on their performance to areas other than the students' school achievement. Therefore, findings derived from studies on students' attributions or teachers' attributions on students' performance may not be relevant or applicable to studies of teachers' attribution on their teaching behaviour. All in all, this researcher has found no relevant literature related to teachers' attributions on their creative teaching. Therefore, the present inquiry on the creative teachers' attributions is to follow an exploratory course, trying to gain more understanding of an area that has been seldom researched.

### **3. Class teaching and its context**

#### **3.1 Rationale for reviewing class teaching and its context**

So far, this chapter has reviewed the research on creativity to provide guidelines for the Phase One study. Likewise, descriptions on causal attributions also pave the way for the Phase Two study. All these discussions have offered general principles and theories that help locate teachers' perceptions of creative teaching. However, there are studies indicating that creativity within one content area is independent of that in other content areas (Csikszentmihalyi, 1988; Gardner, 1993; Sternberg & Lubart, 1995). One may argue that creative teaching may be in some ways different from the creative behaviours in other domains like science, performing art or politics. This would appear to contradict the previous review of the literature that there are fundamental characteristics that creative behaviour of all domains shares. A possible explanation is that there are differences occurred at the operational level as opposed to the conceptual level of creativity.

Feldman et al. (1998) maintained that so far as researches on creativity are concerned, it has been widely accepted that the processes, abilities, personal qualities and cultural contexts vary greatly from domain to domain. Domain-specific skills and knowledge have been acknowledged to be important contributors to creative performance in particular domains (Amabile, 1983; Tardif & Sternberg, 1988). In addition, Winner (1982) went beyond domain-specificity to

hypothesize in her study of creativity in arts that there is variability of creative performance even within a particular domain. Therefore, at the operational level, the creativity of teachers may be in some ways dissimilar to that of the scientists, dancers, political leaders and may even vary among the teachers themselves. In a similar vein, Puccio (1998) advised that in order to understand individuals' creative behaviour, attention to the nature of their undertaking, their current practices and approaches is indispensable. Therefore, to investigate teacher creativity, the nature of teachers' work, their classroom practices, school contexts as well as the avowed school aims which impact teachers every day should not be overlooked. Accordingly, the following paragraphs are to shed light on these areas.

### 3.2 Nature of teaching

Teaching is the process of creating and sustaining an effective environment for pupils' learning. It involves selection of content, application of pedagogy, building working relationship, planning and quality assurance. In the classroom, teachers are responsible for implementing practices of teaching with the intention and anticipation to effectively induce pupil learning.

Operationally, Alexander (1992) categorized practice of teaching under four major aspects: content, context, pedagogy and management. Details of these aspects are elaborated below:

- (1) Content refers to the selection and forms of knowledge, whether as an integrated whole or as separate subjects/areas.
- (2) Pedagogy deals with how pupils learn and how best a particular form of knowledge can be taught.
- (3) Context involves the classroom's physical conditions and working relationship between teacher and the pupils.
- (4) Management concerns planning and quality assurance through assessment of learning and evaluation of teaching.

Later, Alexander (1995) applied another form of “practice” categorization - “classroom organization”, “management of learning” and “wider context”. In this classification, the first two items cover the “content”, “management” and “pedagogy” aspects in the previous categorization whereas the third one has broadened the concept of the original “context”, which relates to what happens inside a classroom, to include influences from colleagues and school. Consequently, the new “context” not only refers to individual classrooms but the organization and its members. More elaboration on the different levels of school context will be given later in this chapter.

### 3.3 Findings on effective teaching

Having depicted the nature of teaching, the researcher sees it fit to discuss the criteria for effective teaching. Tardif et al. (1988) highlighted “relevance and effectiveness” in the validation of creativity. In addition, Cropley (2001) maintained that creativity has repeatedly involved production of “effective” novelty. Therefore, findings on the effective practice of teaching can be employed to validate the extent to which creative teaching ideas can fulfil the requirement on practical value and social worth. The following paragraphs present a list of things-to-do for effective primary school teachers (Jarolimek et al., 1997):

1. Take their jobs seriously
2. Be active teachers
3. Provide children with an opportunity to learn
4. Manage their classrooms efficiently
5. Pace instruction to ensure that learners will be involved in meaningful tasks
6. Have learners master desired outcomes
7. Recognize grade-level differences that require different teacher behaviour
8. Provide a supportive learning environment (p.97)

Jarolimek et al. (1997) reviewed the research findings on effective teaching and considered effective teachers as serious workers who actively provide appropriate environment and opportunities to facilitate and evaluate pupils’

learning of desired outcomes at different grade-levels. Due to the developmental needs of children, effective primary school teaching necessitates teachers to demonstrate more patience and care, more attention to working relationship and being more sensitive towards the responses of individuals.

#### 3.4 Importance of contextual influences

The above sections have described the findings on creativity and effective teaching. With the help of these findings, the respective perceptions of the creative teachers can be identified and matched. However, classroom teaching is understandably not individual teachers' private endeavour. Although creativity is claimed to be positive and productive (Cropley, 2001; Kasof, 1995), teachers may not have the autonomy to act in really bold and flexible manners – solely on their own personal intentions and preferences.

In creative teaching, Moyles (1998, p.6) maintained that it “involves a complex interplay between the child, the teacher and the context”. She argued that what counts as creative is context-dependent. Csikszentmihalyi (1996, p.23) also argued that creativity is “the interaction between a person's thoughts and a socio-cultural context. It is a systematic rather than an individual phenomenon”. In other words, creative teaching is mediated by contextual demands beyond individual intentions. Creative teachers, like all other teachers, are expected to carry out their duties and meet the expectations and values of a particular society. Therefore, in order to study the perceptions of creative teachers in Hong Kong primary schools, an understanding of the school aims and school contexts in the local setting is necessary.

#### 3.5 Aims of primary schooling in Hong Kong

The school aims depict the purposes of schooling. They are statements of values which mirror the society's expectation of its schools and give directions to guide teachers' beliefs and practices. When creative teachers are nominated to and validated in the Creative Teaching Campaign, compliance to these aims can be an

important criterion.

In Hong Kong, the school aims have emphasized the child's interests, needs and rights to learn. Primary schooling is officially advocated as a process to facilitate and nourish the children's growth and various aspects of development (Hong Kong Curriculum Development Council, 1993; Hong Kong Education Department, 2000). In short, child-centred teaching is officially promoted in local primary schools and teachers are expected to put these aims into practice. Nevertheless, Morris (1995) commented that in Hong Kong "the promotion of child centred teaching methods serves as a sort of slogan. ... In reality however, few classrooms are characterized by pupils engaging in genuinely independent and self-initiated learning (p.39)". Obviously, the class teachers are resistant to the changes advocated by the educational officials. In the study of school's resistance to change, Walker et al. (2000) suggested that inadequate teacher preparation; insufficient recognition of school culture and tradition; inappropriate organizational structures, policies and procedures; and ineffective leadership may be causal. With reference to these causes, which stem from different levels of school context, this study seeks to explain the mismatch between official advocacy and class teaching in local schools. Accordingly, the three levels of context at work: individual, interpersonal and organizational<sup>7</sup>, suggested by Munton et al. (1999) are elaborated below with particular attention to aspects of creativity and teaching. In addition, the cultural influences related to a particular level of context are mentioned.

### 3.6 Context at individual level

In this context, the review will focus on the attributes arising from within individual teachers at work. Therefore, the following paragraphs will first highlight (1) the personal characteristics of creative people and (2) the two types of creativity styles. Then (3) the authoritarian upbringing of Hong Kong teachers and (4) their inadequacy in teacher knowledge will be discussed in relation to creativity and teaching.

#### (1) Personal characteristics of creative people

In his longitudinal studies of creative achievement, Torrance (1993) identified the top ten characteristics of the beyonders: (a) delight in deep thinking, (b) sense of mission, (c) love of one's work, (d) clear purpose, (e) enjoying one's work, (f) feeling comfortable as a minority of one, (h) being different, (i) tolerance of mistakes and (j) courage to be creative. This list of traits has emphasized "commitment" and "risk-taking" for creative achievement. In the domain of teaching, Renzulli (1992) studied teachers of the gifted and maintained that the basic characteristics for effective and creative teachers are: flexibility, openness to new ideas, high energy level, commitment to excellence and enthusiasm for teaching. The above list has identified "flexibility", "openness" and again "commitment" as the characteristics for creative teachers. In a study on college teachers, Anderson-Patton (1998) found that creative teachers demonstrated: sensitivity, curiosity, openness, risk-taking, flexibility, intrinsic motivation, leadership, love of learning and commitment. This list of traits has a new item "intrinsic motivation" and echoes the significance of the characteristics like "openness", "risk-taking" and "commitment to work" to creative teachers.

## (2) Two types of creativity styles

The above lists of personality traits emphasize the importance of "courage", "openness" and "risk-taking" in producing creative endeavours. Kirton (1989) hinted that when people create, their creativity styles will influence how they create and what to create and have implications for the intensity of risk-taking. He suggested that the "adaptive" people prefer to create by improving on existing ideas through modification and extension. On the other hand, those who are "innovative" tend to take higher levels of risk and show more self-confidence, possibly leading them to higher levels of creativity. However, Plsek (1998) argued that an individual's orientation towards risk at work is influenced by personality trait and also other contexts in the workplace. That is to say, an individual's creativity style can also be affected by the interpersonal and organizational levels of context. More discussion on these levels of context will be given later.

Having discussed the common traits of creative individuals as well as those of the creative teachers, the review proceeds to examine Hong Kong teachers' internal

attributes in relation to their level of creativity and teacher knowledge.

### (3) Authoritarian upbringing of Hong Kong teachers

Although modern Chinese societies vary in socio-political history and circumstances, Hau (1992) maintained that all Chinese share a common cultural heritage. Despite the British ruling and continual curriculum innovations, the influences of the cultural values still exist and can be observed in Hong Kong Chinese classrooms (Salili, 2001). In Hong Kong, the child-rearing pattern and formal schooling are generally harsh, authoritarian and encourage conformity (Watkins, et al, 1996). Teacher training of local teachers is practically didactic and teacher-dominated (Llewellyn et al, 1982). This kind of educational system may not be conducive to the development of creative thinking (Spence, 1985; Sternberg, 1996). Consequently, with an authoritarian upbringing, teachers are likely to exhibit low creativity and reproduce what their teachers have done.

On the other hand, there are counter arguments that the authoritarian and didactic upbringing is culturally appropriate for Chinese learners. For example, Salili (1996) claimed that the authoritarian rearing can help Chinese students to be more responsible for their success and failure. Similarly, Dimmock (2000) commented that Asian students and teachers are culturally adaptive to the social norms and values. They are responsive to the school contexts such that they adapt and adopt a particular form of direct teaching to suit the adverse features like large classes, poor equipment and frequent examinations. Biggs et al. (2001) also argued that the teacher-dominated approach may not lead to surface learning but help students learn at the appropriate cognitive level. All these arguments have lent a more positive note to the upbringing of Hong Kong teachers. Nevertheless, they cannot spare local teachers the harsh criticisms on their lack of flexibility in class teaching (Law-Fan, 1999; Lee et al., 2001). Apparently, the negative effect of the authoritarian upbringing has not gone unnoticed. Most of these teachers are perceived to lack sensitivity and openness to modify or deviate from the traditional approach. Their courage and commitment to adopt flexible teaching strategies are not in evidence. Usually, they are neither adaptive nor innovative in response to the needs for new approaches to teaching. In addition to the authoritarian upbringing,

their inadequate teacher knowledge has also possibly hindered them from teaching creatively. The following review on expertise and creativity is indicative of the hindrance posed by this constraint.

#### (4) Inadequacy in teacher knowledge

Feldhusen (1995), Langley et al. (1986) and Simonton (1988a) among others emphasized that an adequate knowledge is needed for creativity. Although Martinson (1995) and Cropley (2001) argued that a very high level of knowledge of a field can hinder creativity because the expertise can pre-organize thinking so effectively that only the tried and trusted approaches will be produced, they supported that the absence of an adequate knowledge base can only produce unexpected but ineffective ideas that lead to no creative products. In other words, an adequate knowledge base is prerequisite for creativity. However, this condition is not so favourable to Hong Kong primary teachers.

In Hong Kong, official statistics (Hong Kong Teacher Survey, 2000) showed that about 35% of teachers have not reached the degree level and about one-tenth of the total teaching force has no formal teacher training. High percentages of unqualified teachers are teaching across various subjects. To cope with this inadequacy in teacher knowledge, a widespread use of textbooks and teaching packages is envisaged. These curriculum materials usually prescribe the objectives, teaching aids, duration, methods, exercises and assessment. Accordingly, teachers tend to follow these suggestions and teach by following the procedures set out in these materials.

So far as local school context at the individual level is concerned, the teachers' inadequacy in knowledge coupled with their cultural tendency to follow routines prevents them from modifying the curricular prescriptions to cater for the pupils' individual differences and developmental needs. Few teachers can or dare to take the risk of pushing beyond their knowledge boundaries and create a novel way to facilitate child-centred learning.

### 3.7 Context at interpersonal level

In this context, the review will focus on the interactions between individuals. The social interaction and relationships among teacher colleagues in relation to creativity and teaching will be discussed. The following paragraphs will first highlight (1) the need for a psychologically safe interpersonal context and then (2) the lack of teacher collaboration in Hong Kong.

#### (1) Need for a psychologically safe interpersonal context

Johnson & Johnson (1991) argued that creative teaching would be stifled when teachers feel insecure and competitive among themselves. Therefore, a psychologically safe interpersonal context is needed in order to promote creative teaching. Such environment is even more essential to Chinese colleagues engaged in creativity.

Culturally, Triandis (1995) argued that when compared with the western people, the eastern people emphasize more on interdependence than independence in human relationship. Ng (2001) maintained that the Chinese people are brought up to respect interpersonal relationship and traditions. He further added that in a Chinese workplace, colleagues are expected to maintain institutional norms and to maintain harmonious relationship with one another. Deviating from the accepted practices may result in one's being reproached for non-traditional behaviour and more severely, in losing face, i.e. losing others respect and self-dignity in the workplace (Bond, 1991).

#### (2) Lack of teacher collaboration in Hong Kong

Of the whole range of interpersonal contexts, teacher collaboration like peer observation, team teaching and mentoring to aid teaching is essential to promoting teacher creativity. Simplicio (2000) argued that in order to foster creative teaching, teachers should find time to share expertise and tap into the creativity of colleagues. Similar suggestion is given by Anderson-Patton (1998). However, teacher collaboration is not commonly found in Hong Kong (Lam, 1999; Sin, 2001). The teachers generally feel that collaborative practices reduce teachers' classroom

privacy, challenge their self-pride, violate their personal preference and are even threatening sometimes. Obviously, they envisage that their psychological safety is at stake and the threat of losing face is imminent. Furthermore, they fear that teacher collaboration may produce a host of communication problems whose solutions require sophisticated interpersonal techniques and strategies and that they are ill-equipped to handle. Overall, much effort has to be expended if local teachers intend to establish a favourable interpersonal context for creative teaching.

A case study on local primary teachers' group work (Tam, 2001) revealed that isolation from peers and defensiveness among teachers are often observed. She argued that the phenomenon was attributable to heavy teacher workload and lack of teacher support from the seniors and the school administration. As to these external attributes as well as others, the following section that deals with the context at an organization level is more illustrative.

### 3.8 Context at organizational level

At this context level, the review will discuss the organizational factors that affect every individual in that organization. Specifically, the factors affecting or behaviours shared by the teachers within school and the outside impacts on school in relation to creativity and teaching will be mentioned. The following paragraphs will discuss (1) the official control on teachers' work, (2) the external constraints on teaching and (3) the cultural conformity in school.

#### (1) Official control and external constraints on teachers' work

Yang (1998) claimed that teachers, historically, take up a crucial role in maintaining a harmonious, static social order. Teachers are employed and expected to act according to government policies and the school missions. However, local schools are tightly controlled by the Education Department and could be observed from the fact that they have to comply with detailed regulations on every aspect of their operations<sup>8</sup> (Hong Kong Education Department, 1990; Llewellyn, et al., 1982). In fact, the Education Department has been criticized for placing too much control, uniformity and accountability on local schools (Morris, 1990). Accordingly,

creative teaching may imply violation or non-acceptance of the control. To avoid these unwanted situations, teachers who come up with creativity in teaching are generally less novel and basically forward-increments of current ideas (Sternberg, 1999c).

## (2) External constraints on teaching

In Hong Kong, teachers are criticized for adhering to the prescribed curriculum and sticking to didactic methods of teaching (Morris et al., 1996; Hong Kong Education Commission, 2000). They are faulted on their frequent adoption of one-way lecturing and classroom drilling, routine dismissal of flexible approaches and patchy manifestation of creativity in their teaching. On the other hand, local studies showed that teachers' work is hindered by external constraints like congested physical environment, heavy workload, inadequate contact time with pupils and the exam-oriented system (Llewellyn et al., 1982; Tang, 1994; Morris, 1995; Lee et al., 1999; Morris et al., 2000; Tang, 2000). Obviously, the local government is demanding changes to teachers' practices while there are controls and constraints in the organizational context impeding the meeting of these demands.

## (3) Cultural conformity in school

Culturally speaking, Bond (1991) argued that in a Chinese organization, the subordinates conform to social conventions readily because they do not want to bear the consequence of risk-taking and there is no legitimate assurance for them to try out new, creative idea. Consequently, "subordinates are less likely to volunteer opinions, take individual initiative, or depart from standard operating procedures without a superior's approval" (Bond, 1991, p.83). Based on this cultural practice, local teachers who modify the routine practice at school or implement some creative ideas in class teaching of their own accord may be accused of violation of or noncompliance with the prescribed roles. They are held responsible for all the consequences of teaching creatively. In these circumstances, few teachers will act in a really free, bold and creative manner without the seniors' approval.

#### **4. Some unanswered questions**

Despite academics' effort to investigate into creativity, teaching and even creative teaching, there are some fundamental questions about creative teaching that remain unanswered.

To date creativity still defies precise definition, hence the nature of creative teaching is far from clearly understood. Publications on specific aspects of creative teaching such as its processes and causes are rather scarce. Particularly, research on teacher creativity using a stage model is almost unheard of, let alone similar inquiries into local primary classrooms. To play his part in contributing to understanding the subject, this researcher attempts to apply Cropley's creativity stages (1997) to explore the nature of creative teaching. How and why creative teaching is planned, implemented and evaluated will be also investigated. Guided by the framework, this study is able to achieve a more balanced approach without omitting to describe any particular stage. In addition, the interplay among cognitive, psychosocial and affective elements in the creative teaching processes can be spelt out in detail.

#### **5. Chapter Summary**

To aid the study of teachers' perceptions of creative teaching in local primary schools, this chapter presents a review on the literature related to research on (1) creativity, (2) attribution and its dimensions, and (3) classroom teaching and its context. It covers Cropley's creativity framework which is a stage model illustrating the interaction of cognitive, affective, motivational and psychosocial factors. Also included in the review is a discussion on the four P's: the creative person, product, process and place. And to study teachers' perceptions of causes related to creative teaching, the help of causal attribution together with its major dimensions is enlisted. As teaching is an important domain in the present study, Alexander's categorization of "practice of teaching" – content, pedagogy, context and management – come foremost to mind. Findings about effective teaching practices are cited in response to the requirement for relevance and effectiveness in

creative production. Inasmuch as the focus of this study is on local primary schools, their system, contexts and aims also form an indispensable component of this review. Finally, the chapter ends with some unanswered questions that this thesis intends to explore.

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<sup>1</sup> A seven stage model is published by Cropley in 2001 yet this new model came out too late to be incorporated into this study. However, this has not significantly affected the validity of the current study because the findings of the present study coincide with the design of newly added stage. See the critique of the model in the Discussion chapter.

<sup>2</sup> i.e. the discovery thinking (Guilford, 1959)

<sup>3</sup> i.e. the divergent thinking (Guilford, 1959)

<sup>4</sup> Koestler (1964) postulated that ideas exist in matrices in which conventional associations link ideas from the same matrix whereas surprising associations link up ideas from two different matrices

<sup>5</sup> or productive creativity

<sup>6</sup> Munton et al. (1999) cited the findings on Taiwanese people – the Chinese living in Taiwan, sharing the same confucian heritage of the mainland China.

<sup>7</sup> There is also the 'intergroup level' where the membership of the group can be defined in terms of gender (male or female groups), race (e.g. white or black), departments of an organization (e.g. sales, accounting or manufacturing) etc. Context of intergroup level will arise if the study includes two or more groups of members. Therefore, this level of context is beyond the scope of the present study which focuses on just one group of people – the selected group of outstandingly creative teachers.

<sup>8</sup> In school administration like teachers' registration, employment, deployment, salary scale, job delineation, staff appraisal and promotion; and in class teaching like the choice of subjects offered, choice of text materials, teaching time allocation for individual subjects, requirements to meet public assessment for the secondary school placement etc.

## **CHAPTER THREE**

### **METHODOLOGY**

In the chapter on literature review, it is established that there are a number of significant findings on creativity and teaching yet studies on teacher creativity and the causes of such classroom practice are found to be wanting. Therefore, this study is seeking to fill this gap by exploring the perceptions of a selected group of creative teachers. As mentioned in the introduction, the following questions have guided the investigation throughout the study:

1. How do teachers describe their creative teaching in the classroom?
2. What are teachers' perceptions regarding the nature of creative teaching?
3. How is creative teaching planned, implemented and evaluated?
4. What are teachers' perceptions about the causes of their practice of creative teaching?
5. How do teachers' causal perceptions affect their practice of creative teaching?

This chapter will begin with an overview on the methodology of the present inquiry. Following that are the methodological details of the Phase One and the Phase Two study. The outline of this chapter is as follows:

1. Rationale for using an interpretive paradigm
2. Rationale for a two-phase study
3. Research setting and selection of participants
4. Trustworthiness of the study
5. Role of the researcher
6. Methodological details of the Phase One study
7. Methodological details of the Phase Two study
8. Weaknesses and strengths of the present research approach
9. Chapter summary

## **1. Rationale for using an interpretive paradigm**

### **1.1 Ontological, epistemological and methodological considerations**

The choice of an interpretive paradigm is driven by the complex and multi-faceted phenomena of creative teaching in the classroom. It also reflects the researcher's basic belief about the nature of social world, which is represented by the ontological, epistemological and methodological positions on the interpretive research paradigm (Guba & Lincoln, 1994).

Ontologically speaking, the interpretive paradigm postulates that there are multiple realities and such realities are socially constructed. As a result, "the world is not an objective thing out there but a function of personal interaction and perception" (Merriam, 1991, p. 17). In other words, reality is what the "beholder" perceives it to be. Interpretive inquirers seek answers to questions that stress how social experience is created and given meaning. Its essence is to capture the actor's perceptions, namely how people interpret the world (Denzin & Lincoln, 1994; Maykut & Morehouse, 1994).

The epistemological implication of the above ontological assumption is that an individual actively constructs his/her knowledge - through the interpretation of personal, cultural, and social group experience. In this construction process, "the 'meaning' of experience consists of some sort of orderliness ... [which] can often be deduced by others from the forms of his behaviours, including, especially, what he himself has to say on the matter" (Perry, 1970, p.41).

On the methodological front, Denzin and Lincoln (1994) argued that "qualitative researchers study things in their natural settings, attempting to make sense of, or interpret, phenomena in terms of the meanings people bring to them" (p.2). In other words, this method emphasizes the value of individual experiences and views that one respectively encounters and holds in real-life situations. Moreover, Merriam (1995) suggested that qualitative research is ideal for understanding how participants perceive their roles or tasks in an organization. Accordingly, this researcher's choice of a qualitative method using narratives and

interviews to collect data for the present inquiry is suitable for exploring teachers' perceptions of creative teaching in schools.

### 1.2 Appeal of qualitative research in creativity studies

The aforementioned has given some philosophical considerations to the use of a qualitative approach to the present inquiry. In fact, such approach becomes more appealing when other approaches seem problematic.

Sternberg & Davidson (1986) criticized that many creativity studies often draw data based upon some loosely defined constructs and subsequently interrelate such presupposed definitions to a network of psychological or educational theory. Patton (1990) cautioned that "while there are some instruments that purport to measure creativity, the applicability of those instruments in diverse situations is at least open to question" (p.130). Similarly, Yau (1995) argued that "the sole use of quantifiable measurement which depends mainly on reduction, simplification and selection of criteria gives us little chance of really understanding or grasping the essence or the whole of the multi-dimensional phenomenon – creativity" (p.6). She concluded that the current overemphasis on quantitative research has to be balanced with a more serious involvement in qualitative studies in order to explore the true meaning of creativity. In fact, Runco (1993a) noted that qualitative research on creativity is increasing.

Judging from the comments made by the above researchers, the qualitative approach is adopted because it matches this researcher's personal perspective as well as the research questions of the present creativity study. So far, the rationale for choosing a qualitative research approach has been mentioned. The next section will explain why a two-phase study has been employed.

## 2. **Rationale for a two-phase study**

Two qualitative methods were used, one after the other, to collect data concerning teachers' perceptions of creative teaching in general and then the perceptions of causality in particular. The rationale for doing so is given below.

Phase One uses teacher narratives to explore the teachers' perceptions of creative teaching. The structure and context of the narratives are analyzed by Kainan's framework (1995) and the processes of creative teaching by Cropley's stages of creativity (1997). Findings in this phase will provide hints and directions to conduct the Phase Two study. Subsequently, Phase Two employs Leeds Attributional Coding System (Munton et al., 1999) to locate teachers' perceptions of causality about creative teaching. Semi-structured interviews will be organized to collect data for coding and analysis.

The two phases in the present study are complementary. The narrative analysis in Phase One locates teachers' perceptions on various aspects of their creative teaching, but the underlying causes have yet to be identified. On the other hand, simply interviewing teachers to find out their causal perceptions (Phase Two) will bring to light only a particular notion about the causes of teacher creativity but not the details of the creative process. Therefore, by using narrative analysis (Phase One) followed by an attributional study (Phase Two), the present researcher can firstly gain rich information on the teachers' perceptions of creative teaching and then study perceptions of causality on the same issue in a systematic way.

### **3. Research setting and selection of participants**

In an officially funded campaign, 260 teacher participants from different local primary schools went through a three-phase selection process resulting in twenty-five proposals being assessed as outstanding. To ascertain the evidence of creativity, consensual judgements from agents and experts of the related domain were employed in the selection process (Amabile, 1983; Baer, 1993; Gardner, 1993). The selection comprised three parts. Each teacher participant was asked to give an account of 500 words in Phase 1; then a 25 minute presentation in Phase 2 and a more thorough account of the same creative idea in Phase 3. It was intended to select 20 to 30<sup>1</sup> distinguished creative teaching ideas at the end of this selection process.

With the conclusion of the selection campaign, the achievements of the

awardees provide an excellent setting for this research for a number of reasons: relevancy to this researcher's research agenda, accessibility of data, arousal of his interest in exploring the nature of creative teaching, and his hope to apply the research findings to promoting creative teaching in local primary schools.

#### **4. Trustworthiness of the study**

Research is often designed to understand and improve practice. Therefore, every care must be exercised to ensure that the research is trustworthy before it can become an aid to practice. Miles and Huberman (1994) postulated five types of practical standards to establish the quality of qualitative research: confirmability, dependability, credibility, transferability and utilization. In this section, all five standards are reviewed in the context of the present study.

##### **4.1 Confirmability**

Confirmability is intended for verifying that the findings are derived from the participants and the conditions of inquiry, and are reasonably free from the researcher's unacknowledged biases (Miles et al., 1994). In order to enhance the confirmability of this study, steps were taken to (1) create an audit trail, (2) forge explicit linkage, and (3) maintain researcher's self awareness:

- (1) **Audit trail** - The study's setting, methods and procedures were described openly and in detail. This detailed record could serve as an "audit trail" for confirmability (Lincoln and Guba 1985; Merriam, 1988).
- (2) **Explicit linkage** - Schwandt (1997, p. 164) reminded researchers of the need to link "assertions, findings, and interpretations, and so on to the data themselves in readily discernible ways". Therefore, the research findings were explicitly linked with the data in order to reflect how such conclusions are derived from the participants and the conditions of inquiry.
- (3) **Researcher's self-awareness** – The researcher maintained a high level of self-awareness and was constantly alert to personal assumptions, values and biases. His reflection on the role of the researcher, ethical considerations and

the strengths and weaknesses of the study would demonstrate such attention.

#### 4.2 Dependability

The idea of dependability puts emphasis on the need for the researcher to collect quality data and provide a publicly traceable record to account for the ever-changing context within which research occurs (Guba and Lincoln, 1989; Mertens, 1997). Miles et al. (1994) also claimed that dependability refers to quality control and asks if things have been done with reasonable care. All in all, strategies including (1) quality data, (2) theory connectedness and (3) peer review were implemented to ensure the dependability of this study:

- (1) **Quality data** - The data were collected from the teacher participants in appropriate settings in accordance with some clearly defined research questions and study design. The quality of them was dependable and unlikely to be contaminated by bias or deceit because (a) the participants were knowledgeable about the issues concerned; (b) the participants went through a peer check process in which other teachers and teacher education specialists were asked to examine the data and comment on the plausibility of the relevant information; and (c) data provided by the participants on an occasion subject to public scrutiny, the Creative Teaching Campaign, were not likely to be deceitful.
- (2) **Theory connectedness** - Miles et al. (1994, p.278) maintained that “reliability depends, in part, on its connectedness to theory”. In this study, Cropley’s stages of creativity in The Phase One study and the attribution dimensions in the Phase Two Study were employed as frameworks for data analysis and interpretation.
- (3) **Peer review** – This strategy helps to crosscheck that the researcher is interpreting the data in a plausible manner. In the present study, several forms of peer review were used. They comprised discussions of data and findings with teacher participants of this study, fellow colleagues at the Hong Kong Institute of Education during public research seminars, and mixed audiences at several conference presentations and workshops. <sup>2</sup>

### 4.3 Credibility

Credibility shows if there is an authentic portrayal of what is being looked at such that the findings of the study make sense both to the participants and the readers of the study (Miles et al., 1994). Accordingly, measures including (1) member checks, (2) engagement in research situations, (3) uncertainty and negative evidence, and (4) triangulation were taken to strengthen the credibility of the present study:

- (1) **Member checks** - Such steps were taken to ensure that the participating teachers concurred with the themes that emerged. These teachers were either questioned on their perceptions of creative teaching as interpreted by the investigators or on the accuracy of themes that emerged. In addition, an open atmosphere between the researcher and the teacher participants was created such that unvalidated acceptance of the researcher's interpretation by the teacher participants should not have happened (Silverman, 1993).

To facilitate member checks, two interim reports containing mainly the results, analysis and discussion of the Phase One and Phase Two studies were presented to teacher participants for their review and feedback. Descriptions directly related to the respective participants, e.g. their narrative excerpts and the interview transcripts were highlighted for easy reference. Participants were also encouraged to give their feedback by phone. Overall, the participants were in general agreement with the researcher's interpretation and themes that emerged from the investigation. Up till the submission of the thesis, the participants have suggested no changes to the reports.

- (2) **Engagement in research situations** - in his study of creativity, Weinberg (1976) cautioned that people outside the domain cannot assess the presence or absence of creativity. Accordingly, people from a life background relevant to the phenomena under study are in a better position to judge its credibility. The investigator's empathy with the work of the teacher participants originated from his 16 years experience as a primary school teacher and 11 years as a lecturer teaching primary education programmes at the Hong Kong Institute of

Education. This, coupled with his active role as an organizer of the campaign and substantial engagement as a researcher, enabled him to interpret the research data accurately.

- (3) **Uncertainty and negative evidence** - Kvale (1989) emphasized validity as a process of checking and questioning in order to identify areas of uncertainty, negative evidence and rival explanations. To enhance the validity of the study, for instance, the researcher provided ample opportunity for the participants to question and object to the study data, researcher's interpretations and findings reached in order to uncover their puzzle and disagreement before resolving them. To deal with areas of uncertainty, an "uncertain" category was incorporated. On rival explanations, he found a number of them in the participants' perceptions. Instead of generating confusions, they served to enrich the phenomena under discussion.
- (4) **Triangulation** - Miles, et al. (1994) argued that triangulation among complementary methods and data sources to produce generally converging conclusions is one of the means to strengthen the credibility of a study. The present study was credible because this researcher reads about the creative classroom events reported in the narratives, sees most of them on videotapes as well as the on-stage public performance by the teacher participants with their respective pupils during the award presentation ceremony, and hears them in interviews with the same cohort of participants in the subsequent Phase Two Study. On various occasions, the teacher participants invariably present the same values and perspectives of creative teaching. Therefore, the researcher is confident that the "realities" of the situations as perceived by those teachers involved have been expressed as truthfully as possible.

#### 4.4 Transferability

Transferability refers to the degree to which the results of qualitative research can be generalized or transferred to other contexts or settings. Lincoln and Guba (1985) argued that the researcher cannot specify the transferability of findings and place this responsibility on those who make the generalization. Thus, people who

wish to transfer the results to a different context are then responsible for making the judgment of how sensible the transfer is. However, the researcher can enhance transferability by describing thoroughly the research context and the assumptions that were central to the research. Procedures pertaining to (1) thick descriptions, (2) theory connectedness, and (3) transfer suggestions were adopted to enhance transferability of this study:

- (1) Thick descriptions - Sufficient descriptive data or “thick descriptions” (Geertz, 1973) have been provided in various chapters of this thesis. For example, the research setting, steps in data collection and analysis are listed in the methodology chapter and data collection instruments are included in the appendices. In doing so, enough information and description of the phenomena under study are provided such that the readers can determine how closely their situations match the present research situation, and hence whether the findings can be transferred.
- (2) Theory connectedness - Miles et al. (1994, p.279) suggested transferability can be enhanced when “the findings are congruent with, connected to, or confirmatory of prior theory”. In the present inquiry, Cropley’s stage model (1997) has been applied to guide the research process and to formulate findings. The research results indicated that the stages of creative teaching coincided with those postulated by Cropley. Therefore, it is possible to transfer the present findings to similar inquiries which are guided by the same theory.
- (3) Transfer suggestions - Miles et al. (1994, p.279) reminded qualitative researchers of the need to suggest “settings where the findings could fruitfully be tested further”. Therefore, such suggestions are provided in the Conclusion and Recommendations chapter.

#### 4.5 Utilization

The last domain relating to trustworthiness is utilization which is also known

as action orientation or application. Miles et al. (1994) suggested that a piece of quality research should consider “what the study does for its participants, both researchers and researched – and for its consumers” (p.280). Therefore, to give utilization a practical focus with particular reference to local primary teachers, attention was paid to the effects of this research on (1) teacher participants, (2) local teachers, and (3) official advocacy:

- (1) Teacher participants – Lincoln & Guba (1990) raised the concern for users of findings to experience the sense of empowerment and increased control over their lives. Throughout the research, participants expressed that the narratives and interviews instantly provided them with opportunities to clarify and articulate their thoughts and actions concerning creative teaching. They claimed that the reports on the results and analysis of this research have provided them with the necessary confidence and motivation to apply their creative ideas of quality teaching in the classroom.
- (2) Local teachers – Methods and findings of the present inquiry will be disseminated in accessible language, syntax, format and length to local teachers and schools. In fact, the researcher, in cooperation with some colleagues and the teacher participants, has already created a website to disseminate the participants’ creative teaching ideas. A book consisting of participants’ lesson plans and their views on creative teaching has been published and distributed to more than hundreds of local primary schools. Therefore, local teachers who are interested in creative teaching can apply the suggested ideas, with modification if needed, to their day-to-day classroom teaching.
- (3) Official advocacy – Lincoln (1990) was concerned about the chances that the research findings might have a catalyzing effect leading to specific actions. Owing to the drastic changes brought by curriculum reforms in recent years, teacher creativity has been intensely advocated by many local officials, educators and teachers on various occasions. In response to such advocacy, this researcher presented the Phase One study of this thesis in an international conference organized by Hong Kong Baptist University in June 2001. In

addition, similar paper presentations including the Phase Two study were given in some other academic exchanges with teacher educators at local and national levels<sup>3</sup>. Another new officially funded project has also been launched to apply some of the present findings to promote creative teaching in 22 local primary schools through seminars and classroom practices. Also, an optional module which has been tentatively titled “Teacher Creativity & Child learning” for a PGDE programme is under preparation and will be submitted for validation in due course.

The present investigator has adopted the above measures to ensure the trustworthiness of the study. However, his perspectives may influence the research results (Merriam, 1988). Therefore, the following section will describe the role of the researcher who has acted as an instrument of the inquiry but, concomitantly, may have become a possible source of bias undermining the trustworthiness of the inquiry.

## **5. Role of the researcher**

### **5.1 Rationale for spelling out the researcher’s role**

Schumacher & McMillan (1993) argued that it is important to articulate the researcher’s perspectives and share the potential biases that may influence what have been perceived and reported during the investigation. In addition, Strauss and Corbin (1990, p.42) suggested that a qualitative inquirer should possess “the attribute of having insight, the ability to give meaning to data, the capacity to understand, and capability to separate the pertinent from that which isn’t”. Therefore, a description of the researcher’s educational background, professional interests and his relationship with teacher participants of this study will bring to light such biases and qualities that he might have. The following sections will describe these personal factors and discuss how they affect the trustworthiness of the present study.

### **5.2 Educational background**

This researcher completed the teacher certificate course and worked as a

full-time primary school teacher in the public school system for 16 years. During those years, he continued his academic pursuit, mostly on a part-time basis, and obtained a higher certificate in Industrial Chemistry from the Hong Kong Polytechnic, a B. Ed. degree with first class honours from the University of Nottingham and an M. Ed. degree from the University of Hong Kong. He is now a lecturer at the School of Educational Foundations in the Hong Kong Institute of Education.

### 5.3 Professional interests

His professional interests once focused on science teaching. He wrote two sets of primary science textbooks and some other curriculum packages to promote effective science teaching and learning in local schools. At the Hong Kong Institute of Education, he developed an interest in educational foundations concerning child development, learning theories and teaching strategies. So far, he has spent 11 years as a lecturer and a supervisor of instruction predominantly in the areas of child development and learning. His specific focus on “creative teaching” stems from his interest in promoting teacher creativity among the pre-service and in-service teachers.

### 5.4 Relationship with teacher participants

The researcher’s relationship with teacher participants was developed from various activities organized by the abovementioned Creative Teaching Campaign. All participants knew that he was one of the campaign organizers who greeted them in the promotional seminars, and worked with them during teacher selection, award presentation, study tour preparation and publication of creative tasks.

### 5.5 Impact of the researcher’s personal factors on trustworthiness

This researcher’s educational background and related life experience led him to believe that commitment, endurance and flexibility are the key to success in teaching career. This personal belief may intervene in his interpretations of the participants’ perceptions of creative teaching. However, the researcher maintained a high level of self-awareness to avoid being influenced by such personal belief. In addition, the subsequent member checks and peer review could also help detect and

eliminate such biases.

As mentioned in Section 4.3 (Credibility), the researcher has taken steps to ensure that the situations associated with inequality of power (Silverman, 1993) did not arise in this study. The fact that the participants took part willingly in this study and their sincere, frank responses were signs negating the existence of such relationships.

Lastly, the researcher's professional interests brought to the role of researcher an extended history in first hand classroom teaching as well as observing teaching practices of in-service and pre-service teachers in local primary schools. Such a professional background could give the researcher a solid grasp of the participants' contexts at work. Furthermore, his position as a lecturer at the Hong Kong Institute of Education could provide him the chance to apply the present research's findings to a variety of local teachers and schools.

The above sections have provided an overview on the methodology of the present study. In this overview, the rationale for adopting a two-phase qualitative study, the research setting and selection of participants, the trustworthiness of the study and the role of researcher have been discussed. The present chapter will now move on to provide the methodological details of the Phase One and the Phase Two studies.

## **6. Methodological details of the Phase One study**

The Phase One study employs narratives to identify and analyze teachers' perceptions in relation to the following questions:

- (1) What are teachers' perceptions regarding the nature of creative teaching?
- (2) How do teachers describe their creative teaching in the classroom?
- (3) How is creative teaching planned, implemented and evaluated?

The contents of these method sections include:

### **6.1 Debates on using narratives in qualitative research**

- 6.2 Kainan's framework to analyze the form of narratives
- 6.3 Cropley's framework to analyze the function of narratives
- 6.4 Data source and data transcription
- 6.5 Operational procedure of data analysis
- 6.6 Ethical considerations of the Phase One study.

### 6.1 Debates on using narratives in qualitative research

The place of narrative is growing in the research on teaching and teacher education (Carter, 1995). Erben (1996) equated teacher stories to narratives which he defined: "the types, varieties, and patterns of the accounts or stories that compose life-course experiences" (p.171). In this thesis, "narratives", "stories", and "accounts" will stand for similar sets of data source carrying the same meaning defined by Erben.

Barrone proposed that personal narratives can reveal the internal logic and personal vision of "what is" – "the range of personal relationships, social patterns, and multiple meanings" (1988, p.154). Similarly, Louden (1991) asserted that "because our teaching was such a stream of unreflective experience, I've needed to replay these stories in order to make meaning of the experiences we shared" (p.172). In other words, teacher stories can provide a deeper and clearer understanding of the teaching situations.

Personal narrative is an essential instrument for this study to explore teacher's perceptions, which in turn shed light on teachers' beliefs and practices. Yet there are debates on the use of narratives as a tool to generate knowledge about the phenomena of teaching. The pros and cons of the issue related to different interpretations of the nature of teachers' knowledge and the truth of a narrative are presented as follows. Carter (1995) claimed that teacher narratives may be

"a way of grasping the richness and indeterminacy of our experiences as teachers and the complexity of our understandings of what teaching is. ... (Narrative) came to represent a way of knowing and thinking that is particularly suited to explicating teachers' practical understandings, i.e., the

knowledge that arises from action” (p.326).

Likewise, Cortazzi (1993) suggested that narrative is an appropriate instrument to disclose teachers’ thoughts, perceptions, beliefs and experiences. He affirmed that this instrument “could be a productive way of finding out more about teachers’ knowledge” (p.10).

Nevertheless, Phillips (1996) has a different viewpoint. He queried the use of narrative as a data source for research work and asked a very fundamental question – are the narratives true?

Phillips cautioned that the truth of a story can be in doubt for the following reasons:

(1) Memories are constructed:

Memories are constructed and “can be influenced significantly by the demands of whatever is taking place at present” (Phillips, 1994 p.105). Therefore, when teachers write, they recall what have been done and may sometimes construct what they think that are expected from them.

(2) Stories can be plot-driven rather than truth-driven:

Phillips (1996) noted that “the plot line can determine what events will be presented as factual, even though there is not a scintilla of evidence in favor of them” (p. 105-6). Thus, the plot of a story can hide or over-emphasize what really happens.

The nature of memory and the plot-driven narratives cast a cautionary note on the use of teacher narratives in research works. Such a doubt on the truth is difficult to resolve, yet the comment at least reminds a researcher not to accept the stories at face value. Despite putting much emphasis on the search for truth, Phillips (1997) still admitted that “on some occasions, of course, stories need not be true; the moral lessons conveyed by stories, for example, do not depend upon whether these tales are fact or fiction”(p.102). He further conceded that “stories can be both made, and true, at the same time” (p.108).

Phillips's argument alerted us to the truth of narratives. Doyle (1997), on the other hand, offered a counter argument and maintained that "story offers the only possibility for truth in the study of teaching" (p. 95). He argued that "teaching can only be known through story ... and thus narrative is central to fostering school improvement" (Doyle, 1997, p.93). Such an argument is delineated from his interpretation of the nature of teaching and truth.

Concerning the nature of teaching, Doyle (1997) mentioned that the classroom is a territory where events and actions take place in a coherent manner of time, sequence and continuity. The practice of teaching and process of learning to teach are extremely personal matters. Accordingly, he argued that teachers' personal narrative is an appropriate instrument to explicate these events and actions. He criticized research that focused upon the use of controlled conditions and precise measurements of discrete teacher behaviours as being artificial, lifeless and restrictive to teachers' voices.

In considering the truth issue, Doyle took a new but more appropriate perspective. It differs from the conventional sense of truth as derived from naturalistic science. Since the truth of teaching is not absolute and not directly applicable to solving teachers' classroom problems, Doyle viewed the truth of teacher narratives as a "floating value" that is generated from the interaction of theory, observation, interpretation, and is subject to scrutiny by members in the workplace. Teachers must interpret these truths with particular reference to local situations before they can translate results of research studies into possible actions.

All in all, this researcher accepted Doyle's notion that teacher narratives are not in themselves true but a form of construction influenced by the culture in which teachers find themselves. They stimulate insight into and interpretation of the structures, subtleties, and multiplicity of classroom events and actions. Operationally, trustworthiness is considered when dealing with the truth of the current data source.

The discussions so far highlight the rationale and precautions of using teacher narratives as a research instrument. The researcher believes that it is a both competent and trustworthy instrument to reveal teachers' perceptions of creative

teaching in Hong Kong primary schools. The measures to ensure the trustworthiness of this study have also been discussed earlier in this chapter. It is time to discuss how teacher narratives are analyzed in the present inquiry. In this respect, Kainan's framework (1995) on forms and functions of narratives and Cropley's framework (1997) on creative processes will be discussed one after the other.

## 6.2 Kainan's framework to analyze the form of narratives

Kainan's inquiry (1995) on staff room conversations among teachers offered an applicable theoretical framework for narrative analysis. In his study, he postulated that the narratives' "forms" and "functions" are complementary. The form provides the plot and theme from which the function builds upon while the function furnishes the details to illustrate the form. These concepts are explained as follows:

The form comprises two elements - structure and context. The structure provides the sequential stages of events in the narrative – similar to the plot of a story. In Kainan's study (1995), the teacher narratives share an overall common "structure" which includes

- (1) background - to set the stage at the beginning of the narrative;
- (2) problem - to be defined and tackled by the teacher; and
- (3) battle - to manifest how difficulties are encountered and overcome in the problem solving process.

The above structure provides the plot for teachers to describe their creative teaching. It also gives hints on how to interpret teachers' perceptions of the nature of creative teaching.

"Context" is another element in Kainan's "form" of a narrative - similar to the theme of a story. It is further divided into generalization and advice. "Generalization" is represented by "a very general sentence that describes a

person's own way of looking at life or teaching as a whole experience" (p.166). Such generalization is an abstract expression that provides a loose framework and direction for the teacher's future actions or solution to a problem. In short, it manifests the teacher's perceptions of the nature of creative teaching by defining their values and beliefs on the issue concerned. "Advice" is part of the context that tells largely how the problem is tackled and solved. In other words, it is some kind of succinct statement to indicate the overall ways and means whereby problems can be solved. Therefore, the advice component is capable of furnishing us with teachers' descriptions of creative teaching in more detail. The table below lists the components of the narrative form for easy reference:

Table 2 Form of a narrative

The form of a narrative	
Structure (plot)	- background / problem / battle
context (theme)	- generalization / advice

In this study, the "form" found in the present data source is similar to that in Kainan's study probably because their narrative sources are derived from people of same profession (teachers) describing teachers' lives in school.

With the help of Kainan's framework, the events of the narratives in the present study can be analyzed in a systematic manner to reveal the teachers' perceptions on (1) the nature of creative teaching and (2) how teachers describe their creative teaching in the classroom. Now, it is time to look at the part played by "function" in Kainan's framework.

### 6.3 Cropley's framework to analyze the function of narratives

"Function" denotes the minute details of the narrative content and the meanings (the "moral" lesson) delivered by these narrative details. In other words, analysis of the functions of the narratives can offer a deeper understanding of the teachers' perceptions of creative teaching by showing explicitly how teachers' beliefs are manifested and practices carried out. It should be noted that the

“functions” of the present narratives differ from those in Kainan’s classroom control stories. Such a difference is obvious because the two studies have their own agenda. Perceptions about the beliefs and practice of creative teaching are the major foci of the present investigation and, of course, cover details and meanings vastly different from Kainan’s. Inevitably, the present study has to identify another framework for analyzing the “functions” of the narratives with a view to discovering how creative teaching is manifested in the teachers’ workplace. In this respect, Cropley’s frameworks are appropriate.

Operationally, Cropley’s framework described previously in the literature review chapter has provided some useful categories - “stages”, “cognitive processes”, “affective factors” and “products”; and, at the same time, offered a paradigm that may chart the process of creative teaching. It is assumed, in this exploratory study, that this framework helps to elicit minute details of the creativity elements in the narrative content and is capable of providing rich descriptions on how creative teaching is planned, implemented and evaluated. Nevertheless, the focus of Cropley’s framework is on creativity, not teaching. Therefore, researches on teaching-related contexts described in the previous review chapter are complementary.

In sum, the above offers promising frameworks that help to explore the nature of teacher creativity and disclose the teachers’ perceptions about their beliefs and practice of creative teaching in Hong Kong primary schools.

#### 6.4 Data Source and Data Transcription

The data in this narrative analysis originated from the personal narratives submitted by twenty-five outstanding creative teachers selected as a result of a local campaign mentioned above. These selected teachers were required to submit written accounts of their creative teaching in no less than four pages of A4 paper with 1.5 cm spacing. They were encouraged to enclose related teaching material, audio-visual aids and other relevant resources for reference purposes. They were also asked to express their ideas in ways they deemed appropriate and no strict

rules or format were prescribed for the preparation of these narratives. However, they were asked to include in their accounts information on how the ideas evolved, how the tasks were carried out and how they evaluated their creative tasks so that their creative teaching could be understood and replicated by other teachers should such a need arise later. Presumably, these teacher narratives could provide rich descriptions for the Phase One study.

It should be noted that the raw data were mostly written in Chinese. Only a few submissions of creative teaching of the English Language were written in English. As a certified teacher to teach both English and Chinese, the present researcher was competent to understand and interpret the raw data in either of the languages. It was only after the analysis process, excerpts of the Chinese narratives were translated into English and then presented in this thesis for record purposes. Owing to the differences in language context, the researcher was concerned that the English translations might not carry the exact meaning and implications of its original Chinese version. Therefore, the Chinese excerpts were first translated into English by the present researcher and later translated back to Chinese by a bilingual Chinese-Canadian, who emigrated to Canada at an early age but maintained high proficiency in both the Chinese and English languages. The excerpts so translated were then compared with their original Chinese version. Discrepancies in meanings would require refinement of the English translations and be reconfirmed by mutual agreement between this researcher and the same translator. No obvious discrepancies were found as a result of this verification process. In addition, subsequent member checks by the teacher participants could also ensure the trustworthiness of the data and their interpretations. Therefore, it can be assumed that the English translations of the narrative data reported in the Result and Analysis chapter can provide consistent and comprehensible accounts of the issue under study.

### 6.5 Operational procedure of data analysis

The analysis begins with small units of data to develop larger categories and themes; and hence gradually builds up interpretations and findings (Bogdan &

Biklen, 1992; Lincoln & Guba, 1985). Initially, the narratives are categorized by breaking down the text into segments that may constitute answers to the research questions. A category represents an idea or observation on similar text segments. A simple decision rule of “two confirmations and no contradiction” (Miles et al., 1994, p.131) is used to formulate a category. When applying this rule to the present analysis, a category is regarded as important if it is confirmed by at least two participants and negated by nobody in the setting. Accordingly, the narrative content is compared, contrasted and sorted into categories in order to locate themes of teachers’ perceptions of creative teaching reflected by the participants in various situations. As categories emerge and the accompanying themes begin to solidify, it becomes possible to prepare summary descriptions, set up hypotheses or establish relationships based on the participants’ perceptions. Whenever appropriate, the results are usually arranged into specific categories which are then presented descriptively together with the relevant extracts from the narratives. Throughout the analysis, the teachers’ names in the narratives are withheld. More discussion on the ethical considerations is given below.

## 6.6 Ethical considerations of the Phase One study

Although analyzing the narratives about outstanding achievement of creative teaching may not bring about worries, conflicts or harmful consequences to the teacher participants as well as their respective schools, ethical considerations in research are important and should not be overlooked. Therefore, issues in relation to (1) informed consent, (2) anonymity of participants, and (3) reciprocity are considered (Miles, et al., 1994).

### (1) Informed consent

Participants’ consent to allowing their personal narratives to be analyzed and evaluated by the organizers and the selection panel members was sought before they took part in the selection process. Operationally, all participants signed confirmation slips such that they all agreed to have their names, personal narratives and the respective creative work published in a book or on the internet and then be used or modified by school teachers once they were selected as outstanding. After

the selection process, the researcher discussed his pursuit of the present study with the select participants and they all accepted the researcher's invitation to act as informants of this inquiry.

## (2) Anonymity of participants

Although the teachers' narratives were open to public scrutiny, pseudonyms of the selected teachers were used in this narrative analysis in order to ensure that the teachers' identities and the names of their respective schools would not be identifiable in this phase and the subsequent Phase Two study. The anonymity of participants was preserved by changing the names of teachers and their schools as well as some identifying references such as titles of the creative tasks. Furthermore, they had the opportunity to review the documents arising from this study and the say to edit out any personal information from the final version of the thesis.

## (3) Reciprocity

This researcher believed that the present study is also a process to establish relationships with the participants, and therefore has regarded the reciprocity issue (Seidman, 1991) important. In the design of his study, he managed to ensure that participants benefit from their efforts to share their perceptions and visions with the researcher. As an immediate benefit, he expected the exchange would enhance the participants' awareness of and articulateness on their perceptions of creative teaching. In addition, he hoped this study might contribute to empowering the participants to continue applying their creativity in classroom teaching.

The above sections have presented the methodological details of the Phase One study. This narrative analysis reveals the selected teachers' perceptions of their beliefs, values and classroom practices across the various creativity stages. It provides teachers' views on how creative teaching is described, planned, implemented and evaluated. The next phase of study will then move from the participants' perceptions on "how" to the "why" aspect.

## **7. Methodological details of the Phase Two study**

The purpose of the Phase Two study is to follow up the Phase One investigation concerning the perceptions of the selected teachers about their creative teaching. This subsequent analysis intends to gain a deeper and clearer understanding of teachers' perceptions about the causes that lead to their creative acts in the classroom. Specifically, it is a search for the teachers' causal attributions of creative practices. In this phase, the study is guided by the following research questions:

- (1) What are teachers' perceptions about the causes of their practice of creative teaching?
- (2) How do teachers' causal perceptions affect their practice of creative teaching?

To meet this end, the Leeds Attributional Coding System (LACS for short) devised by Munton et al. (1999) is employed to analyze qualitative data collected from semi-structured interviews. The rationale and implementation details will be discussed in the following sequence:

- 7.1 Rationale for using the Leeds Attributional Coding System
- 7.2 Design of interview schedule
- 7.3 Pilot study and the corrective measures
- 7.4 Interview techniques and ethical considerations
- 7.5 Transcription of tape recording
- 7.6 Data extraction and coding
- 7.7 Operational procedure of data analysis
- 7.8 Precautions of using the LACS

### **7.1 Rationale for using the Leeds Attributional Coding System**

The Leeds Attributional Coding System is grounded in attribution theory and has been applied to various domains, for example (1) clinical psychology

concerning depression, child-parent interactions and therapeutic interventions; and (2) work and organisation behaviour concerning activities like selection interview, customer care and sales performance (Munton et al., 1999; Stratton et al., 1988). Hayes (1999, p.120) confirmed that the system is “the most comprehensively validated and tested procedure ... which can be applied to a great variety of conversational material for a variety of purposes”. He further maintained that the LACS is an open approach that keeps the strength of qualitative data to allow the researcher to develop unpredicted insights, to negotiate ways of understanding and to create meanings from the participants’ contributions. In addition, the LACS is able to explain one’s behaviour at work with respect to the individual, interpersonal and organizational levels<sup>4</sup>. These three levels of work context are helpful in explaining the creative practices of a group of intensity-sampled teacher participants in the complicated context like that in schools.

Therefore, in view of the strengths and applicability of the LACS, the researcher sees it fit to adopt this method to identify and analyze the participants’ causal perceptions in the present inquiry. The following paragraphs are to elaborate the methodological details of this attributional study. Adaptations of the LACS for the present research will be discussed, too.

## 7.2 Design of interview schedule

Under the LACS, semi-structured interviews were arranged to collect attributional statements for coding and analysis. Kerlinger (1970) argued that interviews can help to go deeper into a person’s causes for responding as he/she does. Accordingly, the interviewer would frequently question participants on their perceptions of causes leading them to apply creative teaching. The implicit belief was that their answers could be used to explore teachers’ perceptions of causality about creative practices in the classroom. To design the interview schedule for the Phase Two study, Cropley’s framework on creativity stages (1997) and the respective findings in Phase One were fundamental to and indicative of the manner in which the structure and content of the interview questions were formulated. In addition, Munton et al. (1999, p.8) proposed to solicit “answers to the question ‘Why?’ ” in order to elicit causal perceptions with acceptable consistency. Such a

reminder would be applied in the design of the interview schedule. The operational details of (1) selection of participants, (2) interview preamble and (3) interview questions are given as follows:

#### (1) Selection of participants

The twenty-five outstanding creative teachers who took part in the Phase One study were invited for interviews. These interviewees fulfilled the criterion to act as “intensity samples” (Patton, 1990) and were capable of providing relevant and rich information on the issues under study.

The following interview schedule, which comprises preamble and two sets of interview questions, is constructed as a guide to identify the major areas of inquiry and to determine the relevant data to be obtained in the interviews. Furthermore, such schedule serves to provide as an aid to achieve consistency throughout the present interview exercise.

#### (2) Interview Preamble

This preamble was read to the participants at the commencement of the interview. It reminded the interviewer of what the interview was about, how it would be conducted and what matters had been agreed upon.

At the beginning, the interviewer expressed his gratitude to the interviewee for his/her acceptance of invitation to the interview. He was aware that questions would only lead to uneasiness and avoidance on the part of the interviewees, especially at the start of an interview. Therefore, the researcher decided to start the interview with questions on daily affairs so as to establish rapport and proceeded with a chat on the participant’s background information on the subjects taught, their education and teacher training before asking questions on the major issues.

Then, the interviewee was referred to the relevant pages of the book where his/her creative ideas were found in order to refresh his/her memory of such creative events. This probably would evoke a sense of achievement on the part of the interviewee for being selected as an outstanding creative teacher and having the

creative product published. Some highlights of the campaign would be mentioned to hint at the friendly working relationship established over the years.

The interviewee was then reminded of the objectives of the interview. Related ethical concerns like the use of tape-recorder, anonymity, confidentiality and consequences of the interview were negotiated and resolved, too. Having sorted out the preliminaries, the interviewer would question the interviewee with reference to the interview schedule. In these semi-structured interviews, the participants had a fair degree of freedom on what to talk about and how much to say but the interviewer could assert control when necessary (Drever, 1995). Therefore, he would prompt whenever necessary to ensure that there was sufficient breadth and depth in the interviewees' responses. The pre-designed questions of the semi-structured interview are listed below.

### (3) Interview Questions

1. Creativity stage one (Information)
  - What are the prerequisites for your creative task
  - Why are they important?
2. Creativity stage two (Incubation)
  - How do you know that certain viewpoints are outdated and changes are needed?
  - Why do you think that the change is necessary?
3. Creativity stage three (Illumination)
  - What are the stimuli or events that lead to the emergence of your creative task?
  - Why are they influential to your generation of the creative task?
4. Creativity stage four (Verification)
  - How do you first present your creative task?
  - What are the criteria that make you think the task is satisfactory?
  - Why do you think that such criteria are needed?
5. Creativity stage five (Communication)
  - How do you introduce your creative task to colleagues/ other teachers/ the Campaign?

- Why do you think that the way you present your task to others is appropriate?
6. Creativity stage six (Validation)
- What are the criteria that make your creative task be validated as outstanding?
  - Why do you think that these criteria are necessary?
7. Final question
- Is there anything else you would like to say about this topic?

In addition to the above questions on every stage of creative practices, the following questions are asked to acquire more understanding of the interviewees' perceptions of causes at a particular stage:

1. Will the cause apply in future? (stability)
2. Does the cause apply beyond the creative event mentioned? (globality)
3. Did the cause originate within you, or was it caused by people or events outside? (internality)

The above three questions are posed at each creativity stage to help interviewees translate their own causal attributions into causal dimensions, thus avoiding the "fundamental attribution research error" as claimed by Russell (1982), where attributions are translated by the researcher instead. This set of questions seeks to ensure that the causal dimensions are what the interviewees actually perceive. In other words, with the help of these questions, interviewees are led to code their causal attributions into stable/unstable, global/specific and internal/external dimensions in the present enquiry.

It must be noted that the above two sets of questions belonged to the final version of the interview schedule actually used in the study. When compared with the original schedule, the wording of the questions in the final version is different. There was also a slight modification to the interview preamble and some improvement in the interview techniques after the pilot study. Details of such changes are discussed below.

### 7.3 Pilot study and the corrective measures

The pilot study was two practice interviews carried out to solicit corrective feedback. Two teacher participants were randomly selected and interviewed one after the other following the schedule designed. As the information collected in the pilot was not included in the subsequent main study, it did not have any impact on the integrity of the main study. The real benefit gained from this field experience is that it helped to polish the interviewing skills, identify procedural errors and lead to the amendment of the original interview schedule. After the pilot interviews, it was found that on the whole, the original interview schedule could help to collect the necessary information. Nevertheless, the following measures were incorporated before it was used in the main study:

(1) Add a short discussion on the background of the task to the preamble:

In the first interview of the pilot study, it was found that the interviewee often paused for a long time to recall the background of task creation on incidents like the pupils' problems and work constraints at school. Such frequent and prolonged pauses were found to be disrupting the smoothness and momentum of the interview. Therefore, the researcher decided to incorporate an additional 10 minutes discussion on the background of interviewee's task creation into the preamble before asking questions on the major issues. Questions like "What are the objectives of your creative task?" and "What are the problems in your teaching/pupils' learning?" were then raised to prepare the interviewee for the subsequent procedures. By doing so, the interviewees were found to be more tuned in to the drift of the interviews and the unnecessary pauses did not reappear in the second pilot and later interviews. Consequently, the interview time was targeted at 50 minutes within which the schedule could be completed without undermining the momentum and smoothness of the interviews.

(2) Request for concrete examples to ensure authenticity:

Cooper (1993) defined an authentic response as a spontaneous and honest account of the participant's thinking. To maximize authenticity in the interview, he suggested that the interviewer can encourage the participants to elaborate general statements by recounting actual events. During the two pilot interviews, there were

times when the participants simply gave general statements in reply to the questions being asked. For instance, when the researcher was attempting to elicit information regarding how the creative task was verified as satisfactory, the response given was “It’s good or it’s OK.” The researcher then probed by asking, “Why do you think so?” or “What have you observed to suggest that?” In response to these probes, the interviewees were able to supplement their responses with concrete classroom incidents of creative teaching.

(3) Ask indirect questions to retrieve personal perceptions:

As a result of the pilot interviews, the researcher realized that putting the words “evaluate” or “justify” in the questions would arouse the interviewees’ defensiveness and elicit answers with generally accepted standards of behaviour rather than the personal perceptions of the interviewees. Therefore, indirect questions were then asked to determine what the interviewees really believed or interpreted. For example, information on how he/she evaluated a certain approach might be elicited by asking “Are you happy with what you had done?” or “Would you do it the same way next time?” rather than “How did you evaluate/ justify what you’ve done?” This questioning technique was applied in the main study.

(4) Avoid leading questions:

A leading question is one that makes assumptions about interviewees and possibly affects the answer illegitimately. For instance in the pilot study, the question “when did you stop complaining to the parents on their children’s behaviour?” assumed that the teacher interviewee had been a frequent complainer, and the question “how satisfied are you with the new arrangement of the Games Day?” assumed a degree of satisfaction with the arrangement. The leading questions here might be turned into more neutral ones by rephrasing, for example: “how frequently do you have conversations with the parents on their children’s behaviour?” and “what is your opinion about the new arrangement of the Games Day?” respectively.

(5) Change the terms “creative teaching” to “creative task” in the first set of questions:

In the pilot study, it was found that questions using the terms “creative

teaching” (e.g. in Question 1, 3, 4 etc.) would elicit other classroom practices perceived by the participants as creative yet might not be directly related to the creative tasks submitted to and validated in the Campaign. These responses might provide more information to disclose the participants’ beliefs and values in creative teaching but often led to discussion of other practices not relevant to the creative tasks in question. Therefore, the terms “creative teaching” were changed to “creative task” in the main study.

The above sections have provided the design of the interview, the pilot study and the respective corrective measures. It is time to depict the interview techniques and the ethical considerations connected to the conduct of the interviews.

#### 7.4 Interview techniques and ethical considerations

Good (1966, p.235-6) suggested some techniques to direct the flow of an interview and are considered to be worth noting in the course of interview:

- (1) Open an interview by asking factual, non-threatening questions.
- (2) Stick with fruitful areas once they open up.
- (3) Try to redirect the interview to relevant issues when useful data is not emerging.
- (4) Wind up the interview before the participant becomes tired.

In addition, Fetterman (1989, p.55) claimed that “the interview is not an excuse to interrogate an individual or criticize cultural practices. It is an opportunity to learn from the interviewee”. The researcher believed that this level of respect and sensitivity were indispensable or else defenses and communication roadblocks would crop up to hamper the integrity of the interview. Therefore, Fetterman’s notion was conveyed to the participants in the icebreaking and rapport building, and was duly observed by the interviewer throughout the interview.

It is believed that interviewing is a skill that requires appropriate training and guided experience to build an essential background. The present researcher was

responsible for conducting interviews in the study. His techniques in interviewing were derived from his contact with parents, colleagues and teachers during his twenty years of teaching in primary schools and the Hong Kong Institute of Education. Such experience increased his knowledge, skills and confidence in conducting the interviews. Furthermore, as one of the chief organizers of the campaign, the researcher was knowledgeable in the issue under study. Accordingly, he was able to conduct the interviews with the choice of clear language, appropriate prompts and probes along with the interview schedule.

In the Phase Two study, a pocket size tape recorder was used in the interviews. Prior consent was sought from the participants at the very beginning of the interviews. It freed the interviewer from the trouble of recording the responses by hand and enabled him to devote his full attention to questioning and responding. Interviews in this investigation showed that tape recording brought no negative feelings to the interviewees but rather helped the researcher to reconstruct details of the interviews when transcribing the accounts afterwards.

The above paragraphs have highlighted the basic techniques to conduct interviews. In addition, Kvale (1996) raised the following ethical issues in research interviews: (1) informed consent and (2) confidentiality and the consequences of the interviews. The measures attending to these issues are described below.

#### (1) Informed consent

To acquire informed consent, formal invitation letters were prepared and sent to potential interviewees at least two weeks before the interviews took place. The letters informed participants of the aim of the inquiry, conveyed to them the significance of these interviews, assured them of anonymity and confidentiality, encouraged their consent to the interview, and initiated rapport needed for the later face-to-face contact. (See appendix for the letter.)

#### (2) Confidentiality and consequences of interviews

To attain confidentiality, every participant was re-affirmed at the beginning of the interview that his/her identity and the name of his/her respective school would not be disclosed in the interview transcript and the subsequent analysis. On ethical

concerns about the consequences of the interviews, the researcher presumed that interviews conducted in connection with triumphs of creative teaching were not likely to bring about interpersonal conflicts or harmful consequences. Nevertheless, participants were each given a copy of the tape recording of their interviews. These teachers were reminded that they could listen to the playback of the interviews and object to the use of any part of such recordings whenever they deemed necessary. In addition, the subsequent member checks on the extracted transcripts and the interim report of data analysis could also reassure the participants that the ethical considerations on confidentiality and consequences of interview were properly dealt with.

So far, discussions on the design, techniques and ethical considerations to format and conduct the interviews are given. Accordingly, the raw data of the interviews would then be collected for subsequent processing. The following section is to discuss the transcription, extraction and coding of the interview data.

### 7.5 Transcription of tape recording

All interviews were conducted in Cantonese - a Chinese dialect commonly spoken in Hong Kong - for the sake of intimacy and easy communication. The tape recording was then transcribed verbatim into Chinese. For the sake of preserving the non-verbal aspects of the interview, the present interviewer took brief notes of important contexts and relevant non-verbal communications during the interviews. Subsequently, the Chinese transcripts and the brief notes were studied and analyzed while listening to the corresponding recording playback in order to gain more insights into the behaviours, thoughts and feelings of the participants on the issue concerned.

After the data extraction, excerpts of the Chinese transcripts were translated into English and then presented in the analysis section of this thesis for record purposes. Owing to the differences in language context, similar procedures that had been carried out in the Phase One study like back-translation, refinement of the translation as well as member checks by the participants were followed.

Accordingly, it could be assumed that the English transcripts provided consistent and comprehensible accounts of the issue under study.

## 7.6 Data Extraction and Coding

Attributions were derived from the verbatim transcripts of the semi-structured interviews during which the selected teachers generated attributions whilst discussing and/or explaining their creative decisions and behaviour in the classrooms. The LACS defined an attribution as “a statement in which an outcome is indicated as having happened, or being present, because of some identified event or condition”. Therefore, when extracting attributional statements, all statements identifying the factor, event or condition that establishes an expressed or implied causal relationship with the teacher’s practice of creative teaching would be pulled from the transcripts. Operationally, the attributional statements each containing information about (i) the cause, (ii) the outcome and (iii) the link between them were extracted from the transcripts.

After data extraction, the attributional statements were coded according to three major aspects – (1) personnel coding, (2) dimension coding and (3) content coding. Details of these three aspects of coding are described below.

### (1) Coding of the attributional statements on agent and target

Personnel coding began when all attributions were extracted from a transcript with their cause, link and outcome elements identified. According to the LACS the “speaker” was labelled as the person providing the attribution. The “agent” was defined as the person, group or entity nominated in the “cause” of the attribution whereas the “target” was those mentioned in the “outcome”. In the present study, all speakers were the selected teachers. Evidently, personnel coding for speaker was not necessary. Personnel codes were only used to identify agents and targets. According to the findings in Phase One, the following categories of agent and target were found. Results from the pilot interviews and their subsequent analysis also confirmed that such a personnel list was practical and applicable. New categories were allowed if they emerged in the interviews or later stages of the inquiry. To attain reliable coding, each category was accompanied by a brief

definition and with examples wherever appropriate:

Table 3 The Phase Two study – personnel coding and its definitions

<i>Personnel</i>	<i>Definitions</i>
1. Speaker	Teacher participants of the present study. This category also represents the speaker's intention relating to the design of the creative task
2. Task requirement	This category represents the requirements of the creative task related to its validation by other people, e.g. the rules of the campaign, the campaign judges' opinions and teachers' comments on the task, etc.
3. School	The administration and traditions of the interviewee's school
4. Head	Headteacher of the school where the interviewee works
5. Pupils	Pupils that are studying in the interviewee's school
6. Colleagues	Teacher colleagues working with the interviewee at the same school
7. Parents	Parents of the pupils studying in the interviewee's school
8. Teachers	Teachers in general, who are teaching in the local primary schools
9. Official advocacy	Advocacies promoted by the Department of Education in Hong Kong, e.g. official subject syllabi, curriculum integration, whole-school approach, school-based curriculum, etc.
10. School	The administration and traditions of the interviewee's school
11. Campaign	The Creative Teaching Campaign in which the interviewees participated
12. Outside educational body	The voluntary educational body in Hong Kong, e.g. the community centre, Caritas Hong Kong.

Coding of agent and target was useful because they provided insight into the causal dynamics among person, group or entity. First, the frequency with which the speaker described himself/herself as an agent could indicate the extent to which the speaker attributed himself/herself as an influence to the creative events. Second, matching agents that are most likely to affect certain targets was possible. Finally, the extent to which particular agents were

associated with creative teaching could be located. Operationally, a coding template using Microsoft Excel Spreadsheet has been employed and its details will be displayed in the subsequent coding procedures.

## (2) Coding of attributional statement on causal dimensions

The LACS provided five basic causal dimensions – stability, globality, internality, universality and controllability - with the first three applied to the cause element of an attribution and the last two applied to both the cause and outcome elements of an attribution (Munton et al., 1999). On the choice of coding causes and outcomes, Stratton (1997, p.129) claimed that “there is a progression from coding the cause in the first three (i.e. stability, globality, internality) to coding the whole attribution”. He advised a researcher to choose an approach that suits the purposes of the study and use it consistently in the processes of coding and reporting.

The intention of the present attributional analysis was to locate the selected teachers' causal perceptions of their creative teaching. This means that the teachers' perceived causes are the focus of analysis. Therefore, the present researcher chose to examine the dimensions that apply to the cause element of an attribution, namely stability, globality and internality, from the selected teachers' perspectives. The coding of the other two dimensions (universality and controllability) needs to look at both the cause and outcome elements of an attribution (Munton et al. 1999, p.49-50). The resulting dimensions (universal/personal and controllable/uncontrollable) refer to the whole attribution, instead of the cause element alone. Therefore, the coding of the last two dimensions is not within the scope of the present study. As to the other three dimensions (stability, globality and internality), their definitions and methods of coding under LACS are studied below.

In the present study, coding attributions on causal dimensions was carried out with reference to the definitions prescribed by Munton et al. (1999) and from the perspective of the teacher participants. The LACS assigns each dimension one of the three codes - [0] & [1] for either of the bipolar dimensions and [2] for the uncertain statements. Their definitions are as follows:

- (i) A cause is stable [1] when it continues to apply to future creative teaching events. Unstable causes [0] are transient and will not continue to have an effect on future creative events.
- (ii) A cause is global [1] when it applies beyond the creative event mentioned. A specific cause [0] is unlikely to have influence beyond the creative event identified in the statement.
- (iii) Internal causes [1] are those perceived by the teacher participant to originate from within himself or herself. Shared causality originates from within a group is also accepted as internal when the participant took part in the decision or was an integral part of the group. In addition, when the description represents the participant's intention to design the creative task, the cause is also coded as internal. External causes [0] depict characteristics of other people, events or situations.

The above discussion has described how the three causal dimensions of attributional statements are coded. These dimensions are dichotomized to reflect six numerically coded categories. It is convenient to input these codes into a computer statistics package in order to identify significant patterns. For instance, an attribution pattern represented by symbols like [101] indicates that the causes are mostly stable, specific and internal.

### (3) Coding of the attributional statements on content

Content coding under the LACS evidently demonstrates the qualitative nature of the analysis to attain richness of meaning within the inquiry context. Hayes (1999, p.119) argued that although this approach involves frequencies counting, it is "fundamentally qualitative because it is not pitching theory against reality but is interpreting selected aspects of human functioning in relation to their context, in order to create meanings that can be shared and used".

As the main intention of the Phase Two study was to locate the participants' causal perceptions of their creative practices, content coding of the present study will focus on the causes, not the outcomes. In order to grasp the full meaning of the

content, the causal elements are coded by referring to the related context described in the transcripts while listening to the respective recording playback. To obtain the content coding, similar text segments of the causal elements in the extracted statements are categorized by applying the decision rule “two confirmations and no contradiction” (Miles et al., 1994). Gradually, the categories merge into themes that are summarized in expressions. The formulated categories and themes are in turn used as clues for subsequent content coding. These clues are not meant to be hard and fast decision rules for strict application. Instead, they are treated as guidelines to aid content coding and will be flexibly used within the context of the transcripts. New categories and themes will be added whenever appropriate. To ensure consistency within and between coders, the themes will be recorded and accompanied by brief definitions and examples of the related attributional statements. (See appendix for illustration).

The foregoing paragraphs have described how the coding of personnel, attributional dimensions and content are carried out. It must be noted that the three aspects of coding complement each other to generate holistic meanings of the phenomena under discussion. Operationally, a coding template shown below was devised to facilitate subsequent statistical analysis of the coded data using Microsoft Excel Spreadsheet:

Table 4 The Phase Two study – coding template

#	Q	target	agent	Attributional Statement	sta	glo	int	Theme
T09	1	speaker	speaker	I give ample examples to my colleagues because I want to prove to them my expertise in doing this creative task.	1	0	1	Creator's personal attributes
T12	2	speaker	pupils	My original worksheet is too old-fashioned and modification is necessary because the pupils show no interest in its content	1	0	0	Pupils' learning characteristics

Abbreviation: #: Interview number; Q: question number;  
 sta: stability; glo: globility; int: internality

It is important to note that the processing of the above numerical data is different from simply categorizing the causes and counting the frequencies of their occurrences. Under the LACS, the codes appear only at a late stage to represent a theoretically-developed and thorough analysis. The distinctiveness of this way of coding is marked by the meaningful nature in which the data are collected, extracted and coded as well as the meaningful way in which the analysis is carried out. The following section is to present an operational procedure that illustrates how connections between patterns of attributions and topics of interest are established.

### 7.7 Operational procedure of data analysis

Cohen et al. (2000) claimed that data analysis is the making sense of the data in terms of the participants' definitions of the situation to locate patterns, themes, categories and regularities. To carry out the attributional analysis, Stratton (1997, p.142) suggested the following steps:

- (1) Examine the tendencies in the personnel, dimension and content coding.
- (2) See how the three types of coding are related.
- (3) Do the same for overall attributional patterns.
- (4) Develop possible themes about how the interviewees understand the context.
- (5) Check these themes out through further exploration of the data
- (6) Use the significant combinations of attribution dimensions and content to select groupings of statements. Check that the statements selected in this way have the expected meaning.
- (7) Continue this cyclic process until you are confident that you can give a meaningful account of the interview material.
- (8) Draw out the implications by relating the above account to the context the participants and the concerns that gave rise to the research.

The above steps have provided concrete guidelines for data analysis and will be followed in the study. So far, the procedures on data collection, extraction, coding and analysis in the Phase Two study have been mentioned. Finally, this method section will end with a discussion on the precautions of using the LACS.

## 7.8 The precautions of using the LACS

### (1) Prescribe clear definitions to guide coding:

Munton et al. (1999) claimed that at all stages of the coding process; the researcher has to make subjective judgments. They reminded the researcher that in order to make such subjective extractions and coding as consistent as possible, definitions and descriptions of the codes have to be prescribed unambiguously.

### (2) Code from the speaker's perspective, not the coder's:

Munton et al. (1999) cautioned that attributions are coded according to the perceptions of the speaker such that the codes should represent the meanings a speaker wants to convey, irrespective of the coder's beliefs or opinions

### (3) Employ a second coder to maintain inter-coder reliability:

Munton et al. (1999) are concerned with the extent of agreement between two or more people who have coded the same set of attributional statements. They expect that different researchers can reach similar results of dimensional coding based on the same set of data. To achieve an acceptable level of such an inter-coder reliability, Munton et al. (1999) proposed to have a random sample of 20-30% of the attributions re-coded by a second coder.

The three precautions above are all closely observed in the present study.

## 8. **Weaknesses and strengths of the present research approach**

To end this chapter, the weaknesses and strengths of the present approach are spelt out as follows:

### 8.1 Weaknesses of the present research approach

#### (1) Researcher's bias and subjectivity:

The researcher's bias and subjectivity, as influenced by his values and

attitudes, might distort his interpretations of the participants' ideas. This weakness can be rectified by making his background, interests and relationship with the participants known to the readers.

(2) The lack of classroom observation to triangulate data:

Without observing the preparation and implementation of the creative ideas in operation, the researcher was not in the best position to verify the data. As a remedy, he did so by referring to their teaching aids, learning resources and videotapes of their creative teaching submitted to the campaign. Furthermore, the interview data obtained from the same selected teachers in the Phase Two study would serve to triangulate the narrative data.

(3) Limited control over the selection of participants:

The third weakness is that all participants taking part in the study were selected from one particular event – the Creative Teaching Campaign. Participants' gender, age level, life history, subjects taught, educational background and working experience were not the criteria for selection. They were chosen purposefully for the likelihood that they would be able to provide rich information on the issue under study. That said, the generalizations of the research findings ought to be read in reference to the related population and settings.

(4) Potential temporal variation in the participants' perceptions:

It must be noted that the two sets of data collected in the Creative Teachers Campaign straddled almost three years from Oct 1999 to Sept 2002. In between the submission of the narratives and the interviews, the participants had extensive exposure to the issue through a variety of workshops, seminars and presentations which might change individual participant's perceptions of creative teaching over time. Although the researcher found no substantial discrepancies in what the participants expressed in the narratives and during the interviews, this potential variation may be worthy of note for future studies.

## 8.2 Strengths of the present research approach

### (1) Providing in-depth understanding of the issue:

The creativity of local primary teachers has been rarely studied and this inquiry intends to obtain an in-depth understanding of the meanings and definitions of the situation presented by the teacher participants. Detailed descriptive data and thorough analysis produced by this qualitative study would possibly provide the resources for future research particularly on teacher education.

### (2) Having an intensity sample publicly recognized as outstandingly creative:

In the present study, the teacher participants were nominated by the school heads to go through a three-phase selection process. This cohort had the distinct edge of having their creative teaching publicly recognized as outstanding in the local context and hence was able to provide not only richly descriptive but convincing data for this study.

### (3) Theory-connectedness to reduce unconscious bias:

Under the guidance of some theoretical frameworks, the researcher could investigate into the issue and collect and explore data with minimal risk of being influenced by his personal factors – such as motivation, expectations, familiarity and avoidance of discomfort - which are liable to bias his interpretation of the qualitative data unconsciously.

### (4) Bringing the creative products to the frontline

The present approach adopts Cropley's creativity stages (1997) as a guiding framework for the two phases of studies. "Communication" and "Validation" are two of the six stages found in this framework. The Communication stage requires the provision of easy access to the creative products by other teachers while the Validation stage emphasizes the applicability and practicality of the creative products in the classroom context. In other words, the framework comes with a built-in mechanism that brings the creative products to the attention of other teachers and the field.

## 9. Chapter Summary

This methodology chapter contains three major parts - an overview of the methods and the methodological details connected to the two phases of studies. The overview explains the research setting, selection of participants and the rationale for adopting a two-phase qualitative approach. The role of the researcher and trustworthiness of the inquiry are discussed, too. Following that, the methodological details of the Phase One study are presented. The second part starts with a debate on the use of narratives in qualitative research. Gradually, Kainan's and Copley's studies are introduced as the theoretical frameworks to guide data analysis. Considerations on the data source, data transcription and ethical issues are mentioned at the end of this part. Also described in this chapter are the methodological details of the Phase Two study. This phase extends the Phase One study to locate a deeper understanding of the participants' perceptions about the causes that lead to their practice of creative teaching. The third part begins with the rationale of using the Leeds Attributional Coding System, then illustrates how the data are collected, extracted, coded and analyzed. After that, the interview techniques, pilot study and ethical considerations are examined. This part ends with the precautions of using the LACS. And lastly, the chapter ends with a discussion on the strengths and weaknesses of the present research approach.

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<sup>1</sup> Participants with distinguished ideas would be sponsored to attend a five-day study trip on creative teaching in Taiwan. With the limited amount of funding, only thirty places of sponsorship were available.

<sup>2</sup> For instance: Paper presentation in the Second International Symposium on Child Development: Creativity – a moment of aha! Hong Kong Baptist of University, June 26-28, 2001.

<sup>3</sup> For instance: The National Conference on Innovative Learning – Research & Practices, co-organized by the Hong Kong Federation of Teacher Workers and the Hong Kong Teacher Centre in May 2002.

<sup>4</sup> Other than these three levels, there is an additional level - intergroup level which involves members of another group(s) of people in the workplace. Nevertheless, analysis of causal perceptions from members beyond the selected cohort is not within the scope of the present study.

## **CHAPTER FOUR**

### **RESULTS AND ANALYSIS**

Following a qualitative approach, an analysis chapter deals with “the process of bringing order, structure, and meaning to the mass of collected data” (Marshall & Rossman, 1989, p.112). This chapter begins with the results and analysis of the Phase One study, which are then followed by those of the Phase Two study. The chapter outline is listed below.

1. Synopsis of the Phase One analysis
2. Kainan’s framework for the structure of narratives
  - 2.1 Background
  - 2.2 Problem
  - 2.3 Battle
3. Kainan’s framework for the context of narratives
  - 3.1 Generalizations
  - 3.2 Advice
4. Cropley’s framework for the function of narratives
  - 4.1 Initial stages of creativity - Stages 1, 2 and 3
  - 4.2 Facilitating forces for illumination - Stage 3
  - 4.3 Level of creativity shown - Stage 4
  - 4.4 Requirements for communication - Stage 5
  - 4.5 Criteria for validation - Stage 6
5. Synopsis of the Phase Two analysis
  - 5.1 Overall coding of the entire creative process

- 5.2 Coding of causal perceptions about Stage 1
  - 5.3 Coding of causal perceptions about Stage 2
  - 5.4 Coding of causal perceptions about Stage 3
  - 5.5 Coding of causal perceptions about Stage 4
  - 5.6 Coding of causal perceptions about Stage 5
  - 5.7 Coding of causal perceptions about Stage 6
  - 5.8 Comparison of attributional dimensions at the six stages
6. Chapter Summary

### **1. Synopsis of the Phase One analysis**

The Phase One study seeks to identify and analyze teachers' perceptions in relation to creative teaching. The following research questions have guided the investigation:

- (1) How do teachers describe their creative teaching in the classroom?
- (2) What are teachers' perceptions regarding the nature of creative teaching?
- (3) How is creative teaching planned, implemented and evaluated?

This study first identifies the plots and themes of the twenty-five narratives - using Kainan's framework for structure and context. This framework helps to elicit themes concerning how teachers describe their creative teaching in the classroom and teachers' perceptions about the nature of creative teaching. Then the function of the narratives, namely perceptions of the practice of creative teaching will be located and analyzed with respect to Cropley's framework. This second framework helps to provide description of and discussion on teachers' perceptions of how creative teaching is planned, implemented and evaluated.

## 2. Kainan's framework for the structure of narratives

All narratives in the present study share a common structure with identical sequential stages – background, problem and battle. This structure is the ‘plot’ of the narratives, namely the sequential events in the process of creative teaching. In other words, it provides an overall picture of how the participants describe their creative practices.

### 2.1 Background

The background usually starts with a succinct statement to describe the objective of the creative teaching task:

*‘With the help of magic sponge, pupils can make and identify a simple cubic figure.’*

*(Teacher A)*

*‘To review the simple vowels of Putonghua by rewriting lyrics and choreographing dance movement for children’s songs.’ (Teacher B)*

The objectives of the creative tasks are usually described with expression and terminology similar to those appearing in the behavioural objectives of a lesson in which the required material, teaching process and learning outcome of the tasks are highlighted. Such an opening states briefly the plot of the narrative, and at the same time, provides other teachers with a familiar format of lesson planning to make future replication possible.

Other than the task objectives, the background also indicates the participants’

intentions to fulfil the needs and expectations perceived in their workplace. These needs and expectations are derived from -

Teachers' routine duties like lesson planning, classroom teaching, design of follow-up activities and space review:

*'I teach Level 6 Art and Craft. ...I got the idea when I was preparing my Level 2 Math lesson.'* (Teacher A)

*'In a story format, the seven lessons are revised orally by linking up their contents with one major theme and character.'* (Teacher D)

Teacher training programmes for enhancement and updating in the field of education:

*'In an English refresher course, the tutor introduced to us a method called "words spider [word web] <sup>1</sup>". Then I begin to consider if such method is also applicable in Chinese lessons.'* (Teacher E)

*'I am attending a "120 hour computer literacy" programme. ...I am doing this presentation to put theories into practice.'* (Teacher U)

School policies to promote school reputation or maintain home-school relations:

*'Successful attempts have been made in other schools. Therefore, we would like to implement similar ideas on activities in ours.'* (Teacher I)

*'[The creative task] lets parents and their kids learn and play together. It facilitates communication between home and school, too.'* (Teacher I)

**Educational initiatives from the government or voluntary educational agents:**

*'Promotion of quality education is hot nowadays. Such macro direction has stimulated me into reaction at a micro level – effectiveness of classroom teaching.'*

*(Teacher T)*

*'In response to the requirement of TOC [target-oriented curriculum officially prescribed for primary teaching], ... we design the idiom games... '* (Teacher H)

*'The plan is sponsored by the Tung Wah Group<sup>2</sup>. Activities are held every alternate Saturdays from 10:45 am to 12 noon.'* (Teacher G)

The perceived needs and expectations leading to teachers' creative acts will further be categorized and analyzed when Cropley's creativity stages are applied to discuss the sources of stimulation and experience later in this chapter.

The above discussion shows that the background of the narratives usually highlights the objectives of the creative tasks. Then the descriptions on needs and expectations set the stage for the stories and gradually unfold the motives and directions of designing and implementing creative teaching in the workplace. Nevertheless, in order to gain a clearer understand of what are the teachers' motivations and forces behind the pursuit of their creative endeavours, an analysis of their problems is essential.

## 2.2 Problem

Before teachers go about solving the problems, they define them first. With

such definitions, they are able to identify them in their workplace. The problems mentioned in the narratives usually arise from the pupils' behaviour, their learning difficulties and the lack of resources:

Pupils' problematic behaviour like the loss of interest, lack of proper ability for learning and poor habits are problems that teachers have to tackle:

*'... pupils usually feel bored when they are working on the topics prescribed by the teachers. Accordingly, their essay content is vague and the organization is confusing.'* (Teacher G)

*'... the low achievers ... struggle alone, lag behind in their learning and show frustration and defeat'* (Teacher E)

*'During outings, the kids tend to bring along with them lots of unhealthy snacks.'*  
(Teacher C)

The learning difficulties may originate from the subject pedagogy, cultural interference and the biased curriculum:

*'When the pupils sing a song, they often concentrate on the exact utterance of words and neglect its rhythm. The appeal of the song fades accordingly.'*

*(Teacher F)*

*'Pupils often got mixed up on English vowels with those of Putonghua.'*

*(Teacher B)*

*'Teachers of the Chinese language often claim that listening, speaking, reading and writing are emphasized in their teaching. Yet listening and speaking are usually overlooked.'* (Teacher G)

Resources and guidance for pupil learning are inadequate because of the poor school facilities and weak parental support:

*'There are not enough music rooms and we always have to teach music in ordinary classrooms [where there is no proper equipment to teach music].'* (Teacher F)

*'Our pupils ... are afraid of reading and speaking English. Most of their parents come from the grass-roots<sup>3</sup> and have low English standard.'* (Teacher I)

The teachers usually define their problems with regard to the learning process, teaching content and the related resources. They take note of the factors affecting the effectiveness of teaching and learning. These problems are normally present themselves during class teaching and serve as the targets for teachers' battles.

### 2.3 Battle

Teachers tackle the challenges and problems by choosing an appropriate approach according to their beliefs in teaching. Then they design and implement the respective creative tasks in an attempt to solve the problems:

On pupils' improper attitude and misbehaviour, teachers change the context of learning and organize class activities to arouse pupils' interest and provide learning guidance:

*'Through on-stage performance, pupils can build up confidence in speaking English.'* (Teacher J)

*'Group sharing and investigation are arranged before individual work. ...they will regain confidence and enjoy essay writing soon.'* (Teacher E)

To overcome pupil's learning difficulties, teachers tailor the teaching content and pace the progress in an attempt to ease pupils' learning difficulties:

*'Probably, pupils don't have to worry about writing lengthy sentences. What is needed is simply a word or a phrase to fill in the blanks. The work constitutes no pressure or difficulty.'*

*(Teacher E)*

*'The Little Men [a learning activity] is a bit complicated, yet with more preparation and guidance, they can somehow solve the problem.'* (Teacher K)

Modern technology and computer programmes are also applied to enhance the effectiveness of teaching and learning:

*'Teaching aids: audio-tape, tape recorder, classroom objects, work sheets and overhead projector.'* (Teacher Y)

*'A computer programme is designed and presented to the pupils all the necessary audio-visual effects such that they can listen to the story and watch the respective pictures simultaneously.'* (Teacher L)

To resolve the lack of resources, the teacher uses the remains or readily available

material in their teaching:

*'The magic sponge can be purchased from the Art & Craft Dealers ...or recycled the remains left after Art & Craft lessons.'* (Teacher A)

*[No piano or other musical instruments] '... Therefore, I try to make use of our body-parts and everyday material in the music learning activities.'* (Teacher F)

The battles usually involve classroom interactions between teachers and pupils. The creative teachers intend to solve the perceived problems by their creative tasks. The exact procedures of the creative tasks are listed in individual narratives for public reference and replication. In these battles, teachers tend to be tolerant, open-minded and liberal in their teaching.

The above paragraphs have delineated the structure of the narratives. It presents an overview of how participants describe their creative practices – background, problems and battle. The background provides the objectives and needs of the creative tasks. The problems are defined mainly with respect to the processes of teaching and learning. The battles attempt to ensure more successful school lives for both the children and the teachers.

Following the 'structure', this section begins to explore the 'context' of the narratives such that the teachers' perceptions regarding the nature of creative teaching can be located and analysed.

### 3. Kainan's framework for the context of narratives

The narrative context contains 'generalization' and 'advice' and will be identified and discussed below. The generalizations indicate the teachers' values and beliefs. They represent the basic assumptions and directions of the teachers' creative acts to solve the perceived problems.

#### 3.1 Generalizations

Creativity is every teacher's potential. Teachers should cultivate and develop this endowment:

*'Every person has the ability to create. ... Creating things is not a strenuous or unachievable task.'* (Teacher Q)

*'... [By engaging in the creative task] we can be more creative.'* (Teacher U)

Creative teaching is fun:

*'Pupils are involved and feel happy ... they learn while they play the games.'*  
(Teacher C)

*'Let pupils learn Putonghua with their parents happily.'* (Teacher T)

Creative teaching can initiate active and meaningful learning:

*'The goal is to avoid stereotyping and maintain freshness.'* (Teacher E)

*'[The creative teaching] helps pupils to apply the abstract text content to real life situations.'* (Teacher C)

Creative teaching can satisfy the developmental needs of children:

*'Primary school pupils have short attention span. The audio-visual effects can attract and hold their attention. ...Small children may find it difficult to learn a song if it is presented vocally alone. Pictures and stories can provide them with more concrete learning experience.'* (Teacher L)

*'Linking essay writing with school life, pupils are trained on communication skills so as to promote creative ability, self-confidence and willingness to accept others.'*  
(Teacher G)

Creative teaching necessitates teachers' knowledge and commitment:

*'I'll rewrite the prescribed text and prepare the teaching notes to suit both the pupils and their parents.'* (Teacher T)

*'As a language teacher, I should create for my pupils an environment to learn essay writing.'* (Teacher S)

*'This activity definitely helps the pupils ... however teacher's preparation is very important.'* (Teacher P)

Creative teaching is rewarding:

*'The learning outcome is better than expected. The result of the third worksheet shows that almost 90% of pupils have the correct answers.'* (Teacher M)

*'Support and praise from parents are my best reward. ... Parents said that their*

*kids were no longer shy and scared to speak Putonghua.* (Teacher T)

*'The activity promotes cooperation among teachers. ...It gives teachers the job satisfaction and initiatives to design new teaching methods'* (Teacher I)

The above generalizations represent the participants' perceptions of their values and beliefs in creative teaching. They reflect the basic assumptions on the nature of creative teaching. These assumptions accept teacher creativity as a potential to develop and presume that creative teaching may bring about active learning to cater for whole child development in enjoyable ways. Also, teachers' knowledge of and effort in creative teaching will be rewarded in terms of better pupils' performance, healthier home-school relations and improved team spirit among teachers in their workplace. These generalizations are then complemented by the 'advice' below.

### 3.2 Advice

Advice is opinions given by teachers about what to do and how to behave. As a whole, it indicates the means and processes leading to creative teaching. In this way, a piece of advice acts as an elaboration of the generalization and, at the same time, gives hints on what is actually practised in the classrooms. The advice of the creative teachers is as follows:

Make creation a work habit and the source of satisfaction:

*'I always devote myself to devising interesting and effective curricular material. I enjoy introducing innovations to my ways of teaching.'* (Teacher T)

*'The sense of success [derived from the creative task] prompts teachers to make continuous attempts to design new teaching strategies.'* (Teacher I)

**Organize creative tasks to arouse pupils' interest in learning.**

*'Teachers tell stories, try their best to act humorously, use the popular cartoon characters ... and relate the content to pupils' life experience.'* (Teacher D)

*'Their [the pupils'] contribution of ideas, dedication in the rehearsal, cooperation among each other, ...were miraculous'* (Teacher J)

**Act creatively to provide concrete experience and subject integration:**

*'When pupils personally watch how the rectangular plane changes into a cubic figure, they clearly realize that the base and the top of the figure are of the same size.'* (Teacher A)

*'Pupils are asked to design and cook a nutritious lunch. ... The subject content incorporates General Studies - Food & Environmental Protection, English - food ingredients & cooking recipe, Math - measurement & estimates of the amount and price, and Moral Education - division of labour & team spirit.'* (Teacher C)

**Create a supportive environment with proper guidance and feedback:**

*'At the beginning [of the group activity], the teacher gives a test to the whole class. Then each group competes for marks by guessing the related vocabulary; making a complete sentence and giving the respective synonym or antonym. The award of best vocabulary will be given to the best performers. ... Throughout the process, the*

*teacher can assess pupils' understanding and correct their mistakes whenever necessary.'* (Teacher D)

*'With the help of this computer programme, ... teachers can confirm whether their pupils understand what has been taught ..., and at the same time, consolidate their learning.'* (Teacher L)

Be sensitive to pupils' behaviour and cater for individual differences through creative activities:

*'From my experience, lower primary pupils like listening to the stories told by their teachers. Such activities help deepen their memories, too.'* (Teacher D)

*'Most kids lack confidence when they write poems. ... [During group work] the smart children will be more expressive while the reserved and shy ones are allowed to observe and imitate.'* (Teacher E)

Model creativity in teaching to facilitate pupils' learning:

*'At the beginning, the teacher demonstrates how Chinese hieroglyph [the pictorial representation of Chinese characters] is created and presented on the blackboard. In doing so, the teacher not only alleviates pupils' anxiety to create, he/she can arouse pupils' interest and show that "word-art" is worthwhile trying.'* (Teacher N)

*'They [pupils] are then asked to follow what the teacher has just done and use the same phonetic symbols for other songs.'* (Teacher B)

The above advice mostly enriches the former generalizations by suggesting the appropriate teachers' behaviour based upon some advocated beliefs. For instance, the beliefs that 'Creativity is everybody's potential' and 'Creative teaching is rewarding' are supported by the advice that '[teachers should] make creation a work habit and the source of satisfaction'. Similarly, the value 'Teach creatively to meet the children's developmental needs' is followed by the counsel of 'Be sensitive to pupils' behaviour and cater for individual differences through creative activities'. On the whole, the generalizations describe the nature of creative teaching and, at the same time, portray an advocacy of child-centred schooling. Teachers act creatively as resource persons and facilitators to promote effective teaching and learning. The advice focuses on teachers' provision of creative tasks and commitment to enhance the children's learning. It complements the child-centred generalizations mentioned previously.

The above paragraphs have examined the "form", i.e. the structure and context of the narratives. The background, problems and battles of the creative teachers have been highlighted. Also discussed are their generalization and advice on creative teaching. It is time to identify and analyse their 'function' - how creative teaching is planned, implemented and evaluated in Hong Kong primary schools. In this respect, Crolley's framework is applied below.

#### **4. Crolley's framework for the function of narratives**

Crolley's framework provides a careful guideline to analyze the stages,

factors and products of creative teaching. Such analysis of the narrative content will bring to light its minute details and their related meanings in six consecutive stages. The analysis is as follows:

#### 4.1 Initial stages of creativity - Stages 1, 2 and 3

The first illustration below describes how creative teaching is planned. It provides an overall picture of how Stage 1 (Information) moves through Stage 2 (Incubation) and reaches Stage 3 (Illumination) to initiate a novel configuration of creative teaching:

*'During my teaching practice, I found that primary school pupils liked music lessons very much [Background to collect information]. On the other hand, they often made mistakes in using Chinese punctuation marks [Showing dissatisfaction leading to incubation in terms of problem formulation]. Then I wondered if it was possible to integrate music with the Chinese punctuation. Later, I saw in an English lesson that my colleague used a popular card game. The pupils enjoyed the game very much [Incubation through converged observations]. Consequently, I try to modify and adapt this card game for English learning to my teaching of Chinese punctuation in a musical way [Illumination by associating two different subjects with extended openness onto the teaching activity of the third subject].' (Teacher O)*

The above narrative segment manifests that the creative teacher feels dissatisfied at the pupils' learning then she applies her knowledge and experience to identify and formulate the problem. The problem was then tackled with a creative task illuminated by the teacher's openness and awareness of some seemingly peripheral yet relevant knowledge in her workplace.

In order to exemplify how Stage 2 (Incubation) leads to Stage 3 (Illumination), the following description of “Plastic Bag Planting” is a comprehensive and vivid account of the process:

*‘In 1996, my daughter took home from school some yellow beans. We planted them till they bloomed and yielded new beans. ... In 1997, I attended a General Studies workshop. ... In 1998, I attended a science exploration workshop and began to use clear plastic bags for seed germination and planting. ... In 1999, my school ...’*  
(Teacher P)

The above examples illustrate that long periods of time may be necessary at the information and incubation stages. The teachers perceive and memorize the necessary information which gradually converge and motivate the incubation of the creative ideas. Personal attributes like patience, interest, curiosity and determination to improve oneself are vital.

#### 4.2 Facilitating forces for illumination - Stage 3

Stage 3 (Illumination) begins when certain facilitating forces prop up in the workplace. Examples of such forces and how they illuminate creative teaching are abundant and diverse:

Quality assurance from agents outside the school:

*‘The inspector [Education Department] advised that language teaching should encompass listening, writing, reading and speaking.’* (Teacher I)

*‘The feedback token [an instrument in the creative task] was confirmed and*

*countersigned by parents. ... Many parents expressed that they appreciated the teacher's creativity and enthusiasm in teaching.'* (Teacher W)

#### Academic spur in the educational arena:

*'I attended the International Conference on Gifted Education and came across "Scamper". Then I modified Scamper and used it for my teaching.'* (Teacher Q)

*'I learned about Integrated Language Arts Methods during my sixteen weeks study [an in-service training course for teachers]. Then I put what I learned into practice.'*  
(Teacher X)

#### Duties and commitment in school:

*'In 98-99 annual school plan of English Panel, the following three main objectives were identified. ... In order to attain these objectives, an activity – Reader Role Play Speech Contest was born.'* (Teacher J)

*'In 1999, my school organized "Lesson Planning Teams" to design learning activities... I shared with them my experience and proposed the idea of plastic bag planting.'* (Teacher P)

#### Stimulation from the current social affair:

*'It happened to be the World Soccer season, ... I therefore divided my class into two large groups like the two sides in the match and used the red card, yellow card and green card to ... gauge pupils' performance in the class.'* (Teacher R)

*'Snoopy was the talk of the town. Pupils were then asked to bring their Snoopy dolls*

*to school.’ (Teacher T)*

**Empathy aroused by pupils’ problems:**

*‘I have been teaching Chinese and Putonghua for a very long time. I am deeply aware of the difficulties pupils encountered in essay writing.’ (Teacher S)*

*‘These Primary One pupils do not have any extra-curricular activities. Therefore, I deliberately choose them [as members of the creative task].’ (Teacher T)*

**Devotion to personal interests:**

*‘I love dancing fervently. ...Therefore, during the Putonghua lessons, I always work with my pupils to create the dancing patterns that match the theme of the lesson.’ (Teacher B)*

*‘I often use computer softwares like Powerpoint and Paintbrush. I, therefore, try to apply these programmes to construct this [creative] idea.’ (Teacher L)*

On the whole, the facilitating forces leading to Stage 3 (Illumination) are an amalgam of environmental pressures and personal attributes to fulfil the organizational duties, professional requirements as well as personal expectations.

In addition to the facilitating forces of the social and personal aspects, the creative teachers at Stage 3 perform their divergent thinking – a cognitive ability to seek and accept new perspectives:

*‘I wish that English activities would not be confined to the usual activities like the English essay competition.’ (Teacher I)*

*'Musical dialogue is linked up with the teaching of Chinese punctuation marks to enhance pupils' interests in language learning.'* (Teacher O)

It also appears that flexibility is a key attribute to illuminate novelty of creative teaching. With the necessary open-mindedness and eagerness to take risks, these teachers associate pedagogy with content in different subject disciplines to generate creative ideas:

*'I teach Level 6 Art and Craft. The topic 'Spongy-stamp Painting' has induced me to use the same magic sponge in my Level 2 Mathematics lessons.'* (Teacher A)

*'[By referring to an English lesson,] I improve on the original idea by making the procedures [of teaching Chinese] interesting. The presentation becomes more concrete and vivid.'* (Teacher E)

From Stage 1 to 3, the creative teachers change the stereotyped viewpoints and go through systematic cognitive processes to formulate and solve the problems in their classrooms. Thereafter, they extend beyond the existing boundaries of thinking and create new teaching ideas for the verification process at Stage 4.

#### 4.3 Level of creativity shown - Stage 4

At Stage 4, the teachers implement their novel configurations in the classroom. To attain a positive verification, all selected products should explicitly manifest a certain degree of creativity. They take advantage of their suggestions to enhance the effectiveness or efficiency of teaching – in a creative manner. To judge this aspect, Taylor's categorization on the levels of creativity is put to use below:

*'Clear plastic bags are used to carry out experiments in seed germination and planting. The properties of clear plastic make observation and photo taking easy.'*

*(Teacher P)*

*'The rules used in the soccer matches are adopted as guidelines for classroom discipline to cultivate cooperation and self-regulation.'* (Teacher R)

*'Fishing contest is the game that pupils play all the time. Teachers can apply this game and use common objects like clips, scrap papers and toy soldiers in the classroom activities.'* (Teacher K)

All teacher participants manage to apply the already known in a novel way. Their level of creativity is, without doubt, beyond 'Level 1 - expressive spontaneity' where creative ideas are results of spontaneous thoughts or casual suggestions. They modify the technicality of some existing products and re-apply them in some meaningful teaching situations. However, there is no change in the basic functions of the original products.<sup>5</sup> Therefore, by definition, the creativeness of the participants is classified as 'technical creativity' – level 2 in Taylor's five-level framework.

When new configurations are produced, the selected teachers may clarify, implement and evaluate their creative ideas in the classroom. It may be assumed that the new configurations have been satisfactorily verified by the teachers as well as their school heads because, by regulations of the Campaign, every product must be scrutinized and then recommended by the school head before its submission to the Creative Teaching Campaign. Nevertheless, details of such verification process

are not mentioned in the narratives. Therefore, the Phase Two study has addressed this issue to locate more details of the verification process. Discussion of this stage will be presented later on.

#### 4.4 Requirements for communication - Stage 5

Sequel to Stage 4, teachers submitted their proposals to the committee members and presented their ideas to other teachers of the Creative Teaching Campaign. In this communication process (Stage 5), the participants have to consider how their creative products can be evaluated as outstanding by colleagues, other teachers and the judges of the Campaign. Consequently, they effectively convey their ideas to field members in accordance with the four requirements suggested by Simonton (1988):

- (1) Similar mental elements - Each narrative begins with a succinct statement presenting the information similar to a lesson objective that most teachers think of at the start of their every lesson. Namely, a familiar mindset is employed as an advance organizer to gain and retain attention:

*Using ballads, pop music, newspapers, magazines and daily conversations to equip pupils with the ability to correct syntax errors. (Teacher S)*

*'Using three problem solving activities, from simple to difficult, pupils are guided to discover the properties of magnets.'* (Teacher K)

- (2) Need - The narratives usually highlight some common problems encountered

in local schools, thus creating an empathy and a practical need shared by the creators and the appreciators:

*'My pupils consider essay writing a great burden. Their work is always a mixture of written and spoken languages. They speak in Cantonese, think in Cantonese but write in another form and style.'* (Teacher S)

*'Putonghua is widely used in China. Yet the time allocated for learning pin-yin [phonetics] is not adequate.'* (Teacher T)

- (3) Configuration - The narratives themselves are one of the proper media to deliver the teachers' creative ideas to judges of the Campaign, colleagues and other local teachers. Their oral presentations and teaching aids are also meaningful complements for the selection process. Additionally, the homepage material presented on the websites undoubtedly provides concrete configuration accessible by teachers and the public.

*(Visit the website <http://www.ied.edu.hk/creative/index.htm> for illustration.)*

- (4) Translation - Each narrative provides step-by-step procedures such that other teachers can replicate the task to attain similar experience in their schools.

*(Visit the website <http://www.ied.edu.hk/creative/index.htm> for illustration.)*

Without doubt, the selected teachers can successfully communicate their ideas to the judges, fellow colleagues and other teachers such that their novelty is ready to be validated in the Stage 6 below.

#### 4.5 Criteria for validation - Stage 6

At Stage 6 (validation), analysis shows that the creative ideas are endorsed in accordance with criteria comparable to those postulated by Davis (1992) – practicality, originality and social worth:

##### (1) Practicality

*'Overall, the objectives have been achieved. It was proved by the results of pupils' written work.'* (Teacher V)

*'It has not only triggered their enthusiasm in drama but also enhanced their desire to learn English.'* (Teacher J)

*'The outcome is satisfactory. The pupils' self confidence increases, too.'* (Teacher E)

*'I must ensure good [test] results. ... The results of the tests show clearly that my teaching can improve pupils' ability to correct syntax errors.'* (Teacher S)

*'Time is always a problem. ... Within a short period of time, they understand and memorize how the musical notes are represented by some specific body gestures.'* (Teacher F)

##### (2) Originality

###### (i) Pupils' excitement derived from the creative tasks:

*'When the magic sponge expands, the pupils are deeply involved in the lesson and all feel very excited.'* (Teacher A)

*'Pupils will consider the idea fresh and will then be more attentive.'* (Teacher L)

(ii) Excitement shown by other teachers and parents

*'The Fun Fair was appreciated by parents and commended by my fellow colleagues.'*  
(Teacher I)

*'The result is encouraging and the talent shown in the performance [by the pupils] was amazing.'* (Teacher J)

*'The parents are very happy about the success ... and exclaimed that they [the pupils] are no longer shy to speak up in Putonghua.'* (Teacher T)

(3) Social worth

(i) Advocacy by the official curriculum goals:

*'Each pupil writes a short summary with personal comment of the story – the writing target in TOC. ... chooses four or more idioms from books in the library and study carefully to compile some brief notes – the reading target in TOC.'* (Teacher H)

*'The Chinese [official subject syllabus] emphasizes listening, speaking, reading and writing. ... The little reporter [pupils' role in the creative task] is exactly designed to teach listening, speaking and writing.'* (Teacher G)

(ii) Promotion of joyful learning:

*'The classroom is filled with laughter and the learning of simple vowels becomes fun.'*  
(Teacher B)

*'Pupils can finish their work in a relaxed, lively, free and enjoyable atmosphere. ...They all get satisfaction and joy from their successful attempts.'*

*(Teacher E)*

(iii) Emphasis on pupils' creativity:

*'Using three problem solving activities, pupils can pick up on their imagination and creativity and apply them in everyday life context.'* (Teacher K)

*'... you just can't imagine how fascinating their power of association, fantasy and creativity are.'* (Teacher E)

(iv) Cultivation of cooperation among teachers and with parents:

*'When the class has finished some parts of the activities, the teacher will instantly share his/her observation with other colleagues. Team spirit can then be encouraged in a joyful manner.'* (Teacher H)

*'The parents played happily and encouraged each other. ... Other colleagues were willing to provide guidance and demonstration.'* (Teacher I)

(v) Education through IT<sup>6</sup> :

*'The survey indicates that 22 out of 30 pupils favour that teachers should be aided by computers in class teaching.'* (Teacher M)

*'The PowerPoint presentation includes colourful pictures, fascinating sound effects, cartoons and movies. ...This kind of practice helps pupils to master the new vocabulary more effectively.'* (Teacher U)

The above discussion shows that, at Stage 6 (validation), ‘practicality’ of the creative teaching task is confirmed as pupils have fulfilled the teaching objectives with satisfactory effectiveness and efficiency; ‘originality’ is reflected by the excitement and freshness demonstrated by the pupils, parents and other teachers; and lastly, ‘social worth’ is assured by the successful implementation of some educational beliefs advocated in Hong Kong. In brief, the validation of the creative products is founded upon effective teaching in compliance with the official curriculum as well as the promotion of child-centred ideology through teachers’ commitment, joint efforts, parental involvement and application of modern technology.

The above analysis begins with Kainan’s framework to provide an overview of how the participants describe their creative teaching in the classroom as well as their perceptions on the nature of creative teaching. Subsequently, Cropley’s creativity stages helps to disclose how creative teaching is planned, implemented and evaluated. A summary of the findings is attached at the end of this chapter for easy reference.

## **5. Synopsis of the Phase Two analysis**

The purpose of this phase is to investigate the teacher participants’ perceptions about the causes of their practice of creative teaching in school. The following questions have guided the investigation:

1. What are teachers’ perceptions about the causes of their practice of

creative teaching?

2. How do teachers' causal perceptions affect their practice of creative teaching?

Fundamentally, the Phase Two study adopted the Leeds Attributional Coding System to code spoken attributions from verbatim interview transcripts by taking the operational procedure described in the method chapter. Among the twenty-five participants in the Phase One study, two were invited for the pilot study and the other one could not take part in the interviews because of some personal reasons. Ultimately, twenty-two participants joined the main study in this phase.

In total, 184 causal attributions were identified, extracted and tabulated in a Microsoft Excel spreadsheet. The extracted statements together with their respective English translations and interview questions were sent by mail to individual interviewees for member checking before coding (See appendix for letter requesting member check). Consequently, no objection or further comment was received from the participants. The attributional statements were then coded and second coded on the personnel, causal dimensions and content with codes in the manner described in the method chapter. In order to illustrate how the statements were coded in the present study, some typical statements together with their respective coding and explanations were placed in the appendix.

To achieve greater reliability, a second coder was invited to code about 20% of the extracted statements after the initial coding by the present writer. This coder was a lecturer of Educational Psychology. He was invited to suggest new agents and targets for the personnel coding and new themes for the content coding; though

in the end he agreed with such categorizations in the first coding. Comparison of the coding results from the writer and the second coder shows that they hold the same codes on 87% of the personnel coding, 82% of the dimension coding and 86% of the content coding. Evidently, the intercoder reliability was well within acceptable limits (Munton et. al, 1999).

After the second coding, some second-interviews were arranged with the participants to verify the results of the three types of coding. Such a measure helps to ensure the statements were coded from the participants' perspectives, not the coders. Due to the limited amount of time and effort for both the present lone researcher and the teacher participants, only five interviews could be arranged on availability basis. Consequently, the interviewees expressed no objection to the coding results and the writer believed that adequate amount of quality data were collected. Finally, out of the 184 coded statements, 14 items remained to be 'uncertain' in the coding on causal dimensions. These items were treated as incomplete data and excluded from further analysis. The remaining 170 coded statements were then analyzed with respect to the procedure described in the method chapter.

### 5.1 Overall coding of the entire creative process

The analysis begins with an overall examination of the entire creative process and moves on to analyze the individual stages. It is expected that the LACS helps to locate the participants' perceptions of causes about the creative practices – specifically their causal attributions. Each segment of analysis contains dedicated sections that address the coding with regard to agent/target, causal dimensions and

the respective content. The analysis of data proceeds alongside the related codes tabulated in the frequency tables and charts. To achieve better comparability across different codes, the original frequency counts in the dimension coding and the content coding were converted into percentages to represent the respective proportions of codes generated from the teacher participants. The following paragraphs begin to present an overall picture of the causal perceptions of the creative practices by analyzing the coding of all the 170 attributional statements.

### (1) Personnel Coding

Table 5 Frequency of attributions for agent and target (all stages)

Target	Agents									Total
	speaker	pupils	school	colleagues	official advocacy	Outside educational body	head	campaign	parents	
speaker	85	6	2	1	1	1	0	0	1	97
pupils	11	18	0	0	2	0	0	0	0	31
school	2	0	0	0	0	0	0	0	0	2
colleagues	4	1	0	0	0	0	0	0	0	5
official advocacy	2	0	0	0	0	0	0	0	0	2
head	4	0	0	0	0	0	1	0	0	5
campaign	1	0	0	0	0	0	0	2	0	3
parents	0	2	0	0	0	0	0	0	0	2
teachers	14	0	0	0	0	0	0	0	0	14
Task requirement	9	0	0	0	0	0	0	0	0	9
Total	132	27	2	1	3	1	1	2	1	170

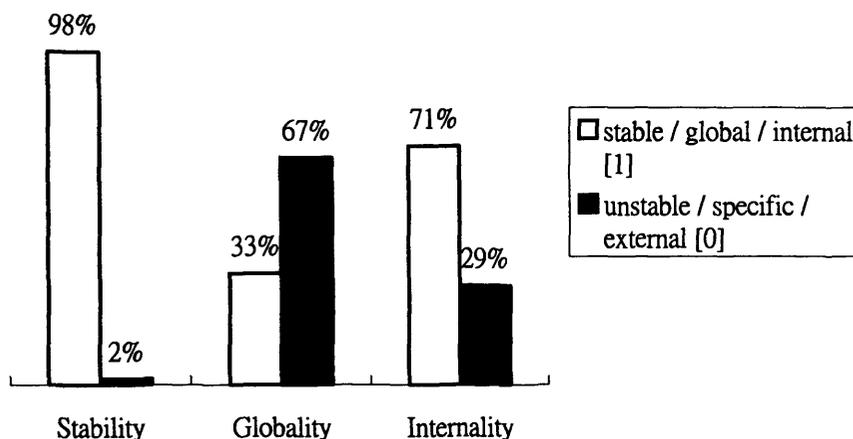
The above frequencies show that the speaker and the pupils figure prominently in the process of creation. Among all that have a part to play, the speaker is the principal agent (132 times, about 78% of all the attributional statements) and the principal target (97 times, about 57%) in the entire process of creation. The pupils, though referred to much less than the speaker in the statements, are significant and account for 16% (27 times) of the total number of agents and 18% (31 times) of the total number of targets. Clearly, the speakers and the pupils are the substantial

figures either influencing or being influenced by the creative teaching practices. Other targets like teachers (14 times), task requirement (9 times), colleagues (5 times) and head (5 times) play an important role in the creative process, too.

## (2) Coding attributions on causal dimensions

The attributional statements are taken as a whole in order to locate the overall attributional pattern of causes in the entire creative process. The proportion of attributional codes of the 170 statements in the three dimensions is illustrated in the figure below.

Figure 1 Percentage of attributions for dimensions (all stages)



On the dimension of stability, the perceived causes of creative teaching as a whole are mostly stable (98%). This may appear to suggest that the causes to bring about creative teaching are mostly applicable to future creative events. In addition, the causal elements of the whole set of attributional statements tend to be specific (67%) and internal (71%), indicating that it is quite probable for them to have an effect on specific creative tasks and arise from within the speakers. Overall, the

dimensional pattern of the attributions in relation to the creative process is stable-specific-internal [101].

### (3) Content Coding

This coding process produces categories, which merge into themes<sup>7</sup>. All of the participants' perceived causes clustered around six distinct themes. The proportion of the themes is represented by the figure below:

Table 6 Percentage of themes (all stages)

Themes	
1. creator's personal attributes	47%
2. creator's teacher knowledge	12%
3. creator's task design	12%
4. school characteristics	8%
5. pupils' learning characteristics	16%
6. outside school attributes	5%

Content coding of the 170 causes shows that the creator's personal attributes account for 47% of the causes, creator's teacher knowledge 12% and creator's task design 12%, making a majority of the perceived causes internal (71%). Therefore, considering the process of creative teaching as a whole, the teacher participants might perceive that the causes of the creative events mainly arise from their personal attributes, teacher knowledge and task design rather than from other external sources (29%) like pupils' learning characteristics, school characteristics and outside school attributes.

The above discussion has provided an overview of the participants' causal perceptions of creative practices in general. However, one must be cautious to interpret such an overview because the lumping of data and then making

comparison of frequencies and percentages as a whole may have oversimplified the nature of creative teaching. Next, it is logical to explore their causal perceptions of creative practices in detail with respect to Cropley's Stages of Creativity. This part will locate the causal perceptions on the one hand and disclose how such perceptions affect the participants' creative practices.

The following analysis is divided into six parts same as the progression of the creativity stages. The numbers of attributional statements at Stage 1 to 6 are respectively 36, 22, 25, 26, 31 and 30. Each stage will start with an interview question and the respective findings in the Phase One study. The attributional statements of that particular stage will then be coded on the personnel, attributional dimensions and content. Then relevant statements will be quoted to illustrate how the participants' causal perceptions influence the respective creative outcomes.

## 5.2 Coding of causal perceptions about Stage 1

The analysis in the Phase One study showed that at this very stage (Information Stage), teacher knowledge as well as personal attributes like patience, interest, curiosity and determination for self-improvement are vital. Time is also an important prerequisite for creative teaching. The following questions were posed to elicit teachers' causal perceptions with respect to the practice of creative teaching at Stage One:

*"What are the prerequisites for your creative task? Why are they important?"*

Based on the responses to the above questions, 36 statements of causal perceptions were identified, extracted and coded. The respective results and

analysis are as follows:

(1) Personnel Coding

Table 7 Frequency of attributions for agent and target (Stage One)

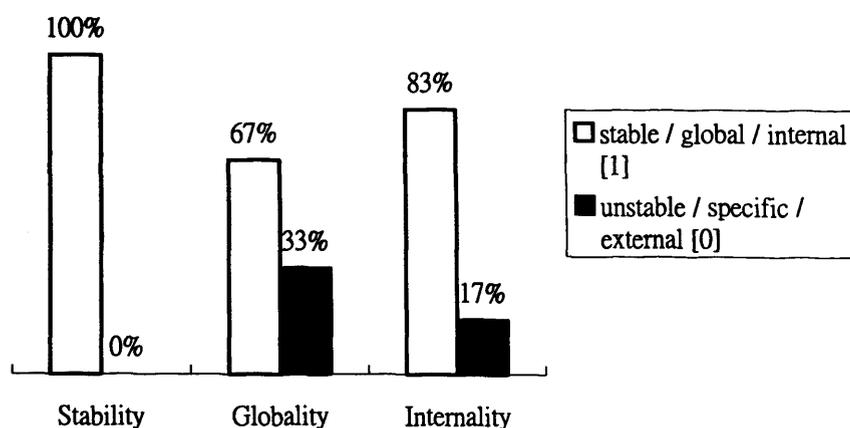
		Agents			Total
		speaker	pupils	school	
Targets	speaker	31	1	1	33
	school	2	0	0	2
	colleagues	1	0	0	1
	Total	34	1	1	36

Frequencies from the above table show that within the 36 statements, the speakers constitute most of the agents (34 times) and the targets (33 times). Furthermore, they perceived themselves much more likely to be the agents as well as the targets. Therefore, largely, the speakers described themselves as the main character that influences or is influenced by the creative events at the Stage 1. In other words, creative teaching at its very beginning is perceived as a self-initiated and self-responsible endeavour.

(2) Coding attributions on causal dimensions

Clearly, presenting the dimensional codes of attributions in percentage can provide useful insights into the speakers' causal perceptions about their creative teaching. The following figure illustrates the proportion of attributional codes generated from the selected teachers:

Figure 2 Percentage of attributions for dimensions (Stage One)



The above figure shows that the speakers perceived the causes of attributions to be mostly stable (100%) and internal (83%). More than half of them considered the causes global (67%). This would seem to suggest that the speakers were more likely to perceive that the causes determining the importance of the prerequisites are influential to the future creative events (stable), can apply to a variety of consequences (global) and, lastly, derive from within the speakers. More details of these causal perceptions are to be found in the section on content coding below.

### (3) Content Coding

Similarly, breaking percentages of attributions down into different themes can indicate the relative emphasis given to different concerns.

Table 8 Percentage of themes (Stage One)

Themes	
1. creator's personal attributes	44%
2. creator's teacher knowledge	39%
3. school characteristics	14%
4. pupils' learning characteristics	3%

Content coding of the causes reveals that 83% of the codes derive from the creator's personal attributes (44%) and teacher knowledge (39%), making the

majority of the perceived causes internal. The other themes of school characteristics and pupils' learning characteristics pertaining to the school tradition, work constraints and classroom context are perceived by the speakers as influential to the creative events over a significant period of time, thus making 100% of the causes stable. The high proportion of global causes indicates that most of the above four themes are conducive to consequences beyond the creative events mentioned in the statements. Probably, themes affecting creative teaching are very likely to be applicable to other aspects of teaching and learning.

In response to the result of the Phase One study, the causal perceptions that answer why interest in creative teaching is considered to be important are regarded by some speakers as basically their preference to do what is happy and enjoyable:

*"Life is happy. ...because I will not design any tasks if I don't like them." (Interview 2)*

*"... because I consider creating things a source of enjoyment." (Interview 11)*

'Determination to seek self-improvement' is raised as another prerequisite in the Phase One study. Some speakers attribute this outcome to their openness and eagerness to depart from routines:

*"... because it prevents me from being led rigidly by the prescribed syllabus."  
(Interview 10)*

*"My character exerts great influential on the evolution of a creative task because it boosts my eagerness to break from the traditional." (Interview19)*

The aspiration to recognition in the workplace is also one of the causes for self-improvement:

*"I'll try my best. Compliments from my colleagues are encouraging because I then find it worthy to finish the creative task." (Interview 11)*

*"I give ample examples to my colleagues because I want to prove to them my expertise in doing this creative task." (Interview 09)*

The causes for requiring teacher's patience at Stage One are manifested by the following quotations:

*"We must be patient to find out my pupils' prior knowledge because we always plan our teaching with respect to what they have learnt." (Interview 06)*

*"I must be persistent because I am planning to present myself as a model displaying the confidence and interest in this task." (Interview 09)*

The above speakers attribute the need of patience to their aim to attain better planning of the creative tasks.

Concerning the importance of 'time', the constraints and dissatisfaction like heavy workload and tight teaching schedule at school are perceived to be attributable:

*"I need more free time and space to think and create, otherwise, I am just too busy with other school duties." (Interview 02)*

*"The school holidays are a decisive break otherwise I can't free myself from the heavy school workload to create the task." (Interview 07)*

*“These additional periods are needed because they permit me to teach without disrupting the normal teaching schedule.” (Interview 03)*

In response to the importance of ‘teacher knowledge’ some speakers consider that they need relevant teaching experience to generate related examples and to build up confidence for task preparation:

*“In my years of teaching, I’ve written lots of lessons plans. Such an inventory of experience is invaluable because I can generate a series of vivid examples in no time.” (Interview 11)*

*“I have been doing drama for a long time. The experience is vital because I’ll have more confidence to apply role-playing in my teaching.” (Interview 22)*

Some speakers need the previous ‘success in related tasks’ as a basis to create:

*“My work experience in Australia is invaluable because I can now modify and apply such an experience for my pupils.” (Interview 20)*

*“My experience in playing jig-saw puzzles with my friends is infectious because such a personal experience has given me the ideas to design similar creative tasks.” (Interview 18)*

Overall the personnel coding indicates that the participants perceived this stage as self-initiated and self-responsible. The dimensions of perceived causes contained in statements in response to the question “Why are the prerequisites

important?” are mostly stable [1], global [1] and internal [1]. The speakers perceived that their preference for happiness at work leads to an interest to create. Their willingness to change and the intention to gain colleagues’ recognition arouse the determination to seek self-improvement. The prerequisite of time is needed to tackle the various work constraints and dissatisfaction at school. Patience is required for task planning. In addition, teacher knowledge is needed to provide the basis and the necessary confidence for task preparation.

### 5.3 Coding of causal perceptions about Stage 2

The result of the Phase One study indicated that at this Incubation Stage, teachers identify and formulate the problems and then try to change the routine viewpoints in order to solve them. The following questions were posed to elicit teachers’ causal perceptions with respect to such findings:

*“How do you know that certain viewpoints are outdated and changes are needed?”*

*“Why do you think that the change is necessary?”*

In relation to the above questions, 22 statements of causal perceptions were identified, extracted and coded. The respective results and analysis are as follows:

#### (1) Personnel Coding

Table 9 Frequency of attributions for agent and target (Stage Two)

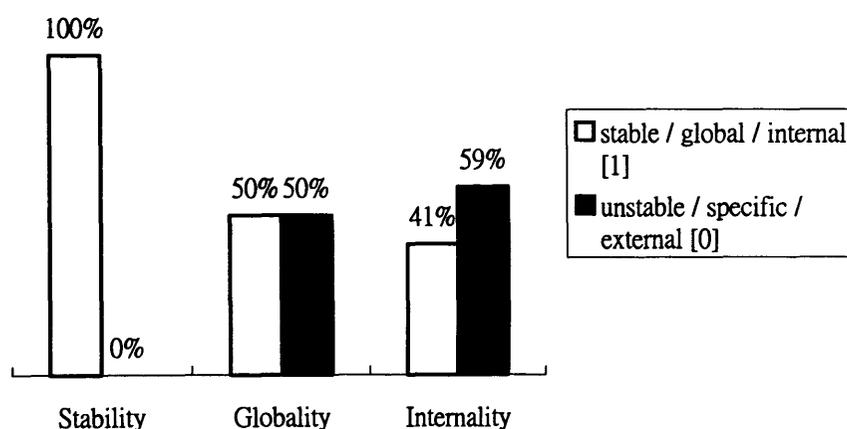
		Agents				Total
		speaker	pupils	school	official advocacy	
Targets	speaker	8	5	1	1	15
	pupils	2	5	0	0	7
	Total	10	10	1	1	22

Frequencies from the above table show that the speakers describe themselves more as targets (15 times) than as agents (10 times), indicating that they perceived themselves to be influenced by, rather than to influence, the creative outcomes. In short, the speakers perceived themselves more as targets when changes from the old were necessary. While both the speaker (10 times) and the pupils (10 times) are the chief agents to initiate the changes, when compared with the corresponding targets – (pupils/7 times; speakers/15 times), the frequencies of the corresponding targets seem to suggest that the speakers are the ones to change more if the classroom problems are to be faced and tackled.

## (2) Coding attributions on causal dimensions

The following figure depicts the proportion of attributional codes generated from the selected teachers:

Figure 3 Percentage of attributions for dimensions (Stage Two)



The above figure shows that the speakers perceived all causes of attributions to be stable (100%). These causes derive partly internal to (41%) and partly external to (59%) the speaker. The attributions related to the dimension of globality split between global and specific causes. Quite possibly, the speakers perceived that the

causes bringing about changes from the old practices a definite influence on the future creative events (stability). However, these causes can be either task specific or influential to other consequences (globality) and it is almost equally likely for them to derive from within or outside the speakers (Internality). More analysis of these causal perceptions is elaborated in the section on content coding below.

### (3) Content Coding

Table 10 Percentage of themes (Stage Two)

Themes	
1. creator's personal attributes	36%
2. creator's teacher knowledge	5%
3. school characteristics	9%
4. pupils' learning characteristics	45%
5. outside school attributes	5%

Content coding of the causes shows that the amount of themes belonging to the creator's personal attributes and teacher knowledge is 41%, indicating one-third of the perceived cause are internal. The pupils' learning characteristics (45%), the school characteristics (9%) and the outside school attributes (5%) are external causes to provoke changes from the traditional. These external causes consist of official advocacy, school tradition, work constraints, outcome of learning, content of learning, classroom context and learning process which are perceived by the speakers as having a steady influence on the creative events, thus making 100% of the causes stable.

Sequel to the result of the Phase One study, the causal perceptions that answer why the change is necessary are focused on three major problems – pupils' lack of interest to learn, pupils' learning difficulties and some out-of-classroom

contexts. In response to pupils' lack of interest, the speakers begin to change their usual practices because of their intentions to arouse more positive responses from pupils:

*"I am going to add something new to my traditional teaching method because I want my pupils to enjoy learning." (Interview 11)*

*"My original worksheet is too old-fashioned and modification is necessary because the pupils show no interest in its content." (Interview 12)*

The changes are also attributed to the speakers' constructive attitude towards their teaching career:

*"Teaching can be boring when you are doing the same thing day after day. I will not tolerate this loss of interest because I don't want to see my work becoming a burden on my life." (Interview 22)*

*"The pupils find it boring to draw in this manner. This kind of learning process must be modified because I take it as a challenge to test my ability to teach." (Interview 10)*

In response to pupils' learning difficulties, the speakers transform their approaches in order to ensure pupils' attainment:

*"I introduce this new kind of essay writing because I really want them to pick up the skill." (Interview 02)*

*"Many pupils cannot write the Chinese characters properly. Their poor performance must be improved because they have to master the skill." (Interview 09)*

Finally, speakers' reactions to the prescribed curriculum from schools and the official advocacy from the Education Department are also the perceived causes of incubating the creative events:

*"I integrate the related topics into a series of activities because the syllabus advocates a thematic approach." (Interview 03)*

*"I often make adjustment in teaching to cater for my pupils' needs because I must teach according to the school-based curriculum." (Interview 08)*

Overall, the dimensions of perceived causes contained in statements made in response to the question "Why is the change necessary?" are stable [1] but exhibit no tendency to polarize on the other two dimensions. The speakers perceived that their reactions to curriculum prescriptions, assurance of pupils' academic attainment, intentions to arouse pupils' positive responses, as well as their constructive attitudes towards the teaching career are causal to the changes from the traditional. Furthermore, the personnel coding indicates that between teachers and pupils, teachers are the ones in the classroom to change more if the problems are to be dealt with in new ways.

#### 5.4 Coding of causal perceptions about Stage 3

The Phase One study revealed that at this Illumination Stage, the facilitating forces leading to this stage are an amalgam of environmental pressures and creators' personal attributes. In addition, the creative teachers associate the seemingly peripheral yet relevant aspects and take the challenges to teach flexibly in their generation of the creative tasks. The following questions were asked to

elicit teachers' causal perceptions of their creative practices with respect to such findings:

*“What are the stimuli or events that lead to the emergence of your creative task? Why are they influential to your generation of the creative task?”*

In response to the above questions, 25 statements on causal perceptions were identified, extracted and coded. The respective results and analysis are as follows:

### (1) Personnel Coding

Table 11 Frequency of attributions for agent and target (Stage Three)

		Agents				Total
		speaker	outside educational body	head	campaign	
Targets	speaker	12	1	0	0	13
	pupils	2	0	0	0	2
	school	0	0	0	0	0
	colleagues	2	0	0	0	2
	head	4	0	1	0	5
	campaign	1	0	0	2	3
	Total	21	1	1	2	25

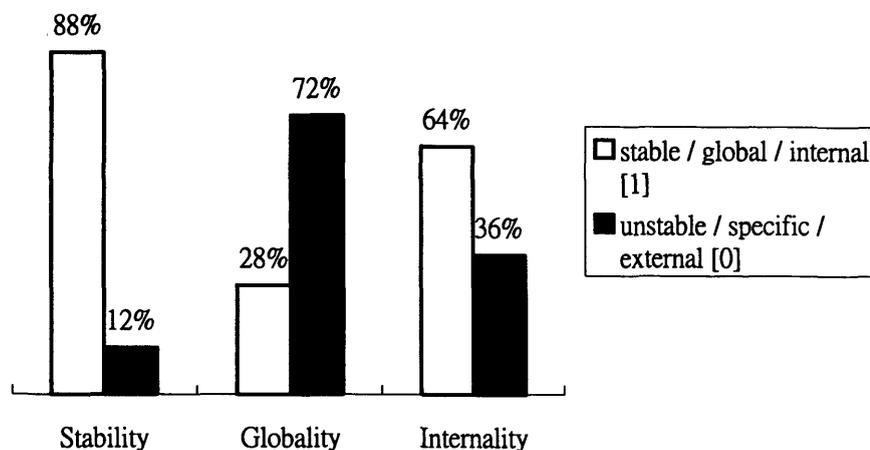
The frequency table above shows that the speakers describe themselves more as agents (21 times) than as targets (13 times), indicating that they perceived themselves to influence, rather than to be influenced by, the creative outcomes. In addition, the high frequency of speaker among other agents (21 out of 25 times) appears to suggest that the speakers perceived themselves as playing the principal role in the generation of the creative tasks. Other agents (outside educational body, school head and the Campaign) have a part to play but their influence is comparatively minimal. Nevertheless, the fact that the head was referred to as the target five times and the campaign three times should not be overlooked. These

data indicated that the school heads and the Creative Teaching Campaign are important targets or goals to be aimed at in the course for task generation.

## (2) Coding attributions on causal dimensions

The following figure shows the proportion of attributional codes generated from the selected teachers:

Figure 4 Percentage of attributions for dimensions (Stage Three)



The above figure indicates that the speakers perceived most of the causes are stable (88%). A few unstable items (12%) show that some transient causes exist at this creativity stage. About 2/3 of the causes are internal and the other 1/3 external. There are also a high percentage of specific causes (72%), when compared with the previous two stages. These casual perceptions are further discussed in the content coding below.

## (3) Content Coding

Table 12 Percentage of themes (Stage Three)

Themes	
1. creator's personal attributes	44%
2. creator's teacher knowledge	24%
3. school characteristics	16%
4. outside school attributes	16%

Content coding of the causes shows that the amount of themes belonging to the creator's personal attributes and teacher knowledge is 68%, accounting for about two thirds of the perceived cause internal. The school characteristics (16%) and the outside school attributes (16%) are external causes exerting an influence on the generation of the creative task. The majority of these external causes come from the temporarily assigned school duties, fresh ideas from outside educational bodies and the present Creative Teaching Campaign. These external causes are transient events and are therefore perceived by the speakers as unstable. The high percentage of specific causes might be due to the nature of this stage where specific tasks are produced to tackle the particular problems formulated at Stage 2. For examples:

*"The mistakes pupils made on this topic have led to the emergency of this task ... "*

*(Interview 11)*

*"... I am compelled to design this task because I must meet the assessment requirement.*

*..." (Interview 18)*

*"The head asks me to design the learning activities for our gifted children ..."*

*(Interview 02)*

Distinct problems like pupil learning difficulties, speaker's study requirement and the school duties are individually tackled by generating a specific creative task as a solution to a particular problem.

When asked why certain stimuli or events are influential to the generation of the creative task, most speakers reiterated causes like reactions to official advocacies, fulfilment of the assigned duties or acquisition for personal satisfaction. These environmental pressures and the personal factors have already been mentioned in the narratives submitted to the Campaign. Additionally, some speakers have highlighted the capacities of school head teachers and the immediate push from the Creative Teaching Campaign as the prime motivation behind their creations:

*“... because I am assigned by the head to take the lead and liaise with other colleagues to work for the task.” (Interview 05)*

*“The head will support my proposal to design this creative activity because I am the panel chairperson and I am obliged to take a leadership role in curriculum planning.” (Interview 03)*

The above quotations might suggest that with clear delineation of duty together with proper delegation of authority, the speakers are empowered to work with other colleagues to generate the creative events. In other words, the school heads are perceived to play a crucial role in the task generation.

The present Creative Teaching Campaign was also mentioned during the interviews as an important occasion for which the task generation is aiming at:

*“The campaign is a good opportunity because it provides the chance for teachers to disseminate the tasks to others.” (Interview 18)*

*“Your campaign holds out an enticing opportunity because it pushes many teachers to design the tasks.” (Interview 07)*

Other than the above external causes, the speaker’s personal attributes remain to be the main agents to generate the creative tasks. These attributes include:

**(i) Concern for the pupils’ learning outcome:**

*“... because I have great sympathy for their poor homework results.” (Interview 09)*

*“I find that my teaching approach is outdated because I realize that my pupils can learn better through the problem-based approach.” (Interview 14)*

**(ii) Affinity for challenges:**

*“My idea of adding music to my PowerPoint presentation has been criticized as unworkable. It becomes such a challenge that I refuse to give up because I'd feel particularly satisfied if I can accomplish this task that people have a general opinion that it won't work.” (Interview 07)*

*“The Creative Teaching Campaign means thrill because I like to face challenges.” (Interview 04)*

**(iii) Being collaborative with colleagues:**

*“My colleagues' partial understanding of the teaching content [moon phases] has spawned the need to work out a remedy because I always want to help my colleagues with their teaching.” (Interview 17)*

*“By coincidence, colleagues of another subject want to design an activity together. Such a collaboration starts off because we want to produce a meaningful and interesting activity.” (Interview 15)*

Lastly, the Phase One study found that attention to the seemingly peripheral yet relevant aspects is an important ability leading to the generation of the creative tasks. The speakers perceived that such kind of divergent thinking leading to the flexible use of teaching approaches and content might be stimulated by their determination to instil active learning in their pupils:

*“The dance course has given me the hint because I find that the combination of dance movement with verse speaking can arouse more pupils' active participation.” (Interview 11)*

*“The game has given me this educational idea because I find the game interesting and would like to use it to attract my pupils.” (Interview 10)*

In sum, the dimensions of perceived causes contained in statements made in response to the question “Why are the stimuli or events influential to your generation of the creative task?” are mostly stable [1], specific [0] and internal [1]. The speakers claimed, on the one hand, some of their reactions to the environmental and personal attributes as the causes; and on the other hand, pointed out the importance of the head teachers and the Creative Teaching Campaign in their generation of the creative tasks. In addition, most speakers perceived that they are the principal agent in the production of creative tasks. Their personal attributes including concern for the pupils' learning outcome, affinity for challenges and

intention to collaborate with colleagues are important causes of task generation. Furthermore, the speakers' determination to instil active learning is perceived to be able to stimulate the flexible use of teaching content and approaches.

### 5.5 Coding of causal perceptions about Stage 4

At this Verification Stage, the creative teachers implement their novel configurations in the classroom. They explicitly manifested certain degrees of creativity in their teaching tasks. Yet, these tasks must be proved to the satisfaction of the participants themselves as well as other school members that the tasks were creative before they were submitted to the Creative Teaching Campaign. The result of the Phase One study indicates that the creativeness of their new practices is classified as 'technical creativity' – level 2 in Taylor's five levels of creativity. Nevertheless, details of how such verification were gone about were not mentioned in the narratives such that it was impossible to carry out an analysis of its criteria in the Phase One study. For this reason, the following questions were posed in the interviews to elicit the missing details of the verification process as well as their causal perceptions about the practice of creative teaching with respect to the relevant criteria:

*“How do you first present your creative task? What are the criteria that make you think the task is satisfactory? Why do you think that such criteria are needed?”*

In relation to the above questions, 26 attributional statements were identified. The outcome elements of these statements clearly exemplify the criteria by which the newly generated tasks are verified as satisfactory. These criteria need to be explored first before discussing the related causal perceptions.

As soon as the creative tasks are produced, the teachers have them clarified, implemented and evaluated in the classroom. Apparently, this venue is chosen because the tasks are generated to fulfil some needs or to solve certain problems in their own schools. It is found that the verification of these creations or new configurations focuses on three major aspects of pupils' learning – process, context and outcome:

*“The pupils are very attentive to my teaching when I am using the PowerPoint presentation ...” (Interview 07)*

*“The pupils can explain the phenomenon clearly ...” (Interview 10)*

With the introduction of the creative tasks, the teachers perceive that the pupils' learning process is improved.

*“That pupils show more interest for the task learning is greatly valued ...”  
(Interview 21)*

*“The pupils are willing to carry out the task ...” (Interview 11)*

*“The pupils are very excited when they see the sponge grow into a prism ...”  
(Interview 01)*

Better classroom context and learning atmosphere are also apparent.

*“The pupils make distinct improvement following the implementation of the task ...”*

*(Interview 04)*

*“The pupils can overcome their weaknesses in sentence building... ” (Interview 08)*

Enhanced learning outcomes are achieved through the teachers’ implementation of the newly generated tasks.

In addition to the criteria on pupil learning, the need to acquire recognition and support from various school members is a must at the stage of verification:

*“My colleagues give me the compliment right away ...” (Interview 09)*

*“The participation of parents is unexpectedly high ...” (Interview 05)*

*“The pupils' devotion to the learning task is a provable accomplishment ...”*

*(Interview 16)*

These quotations indicate that the support of and recognition by colleagues, parents and pupils are the necessary criteria to verify the creative tasks. Probably, these creative tasks, like other practices of teaching, are held accountable to them.

The above discussion has furnished the verification stage with the information not elicited in the Phase One study. Findings reached in this study show that creative tasks, like normal teaching activities, are perceived to be mutually beneficial to every other teaching practice for the betterment of pupils’

learning. It is equally apparent that teachers' knowledge and action are indispensable to gaining support from members of the school. Having elicited the criteria not found in the Phase One study, more analysis of the causal perceptions of this creativity stage is as follows:

### (1) Personnel Coding

**Table 13** Frequency of attributions for agent and target (Stage Four)

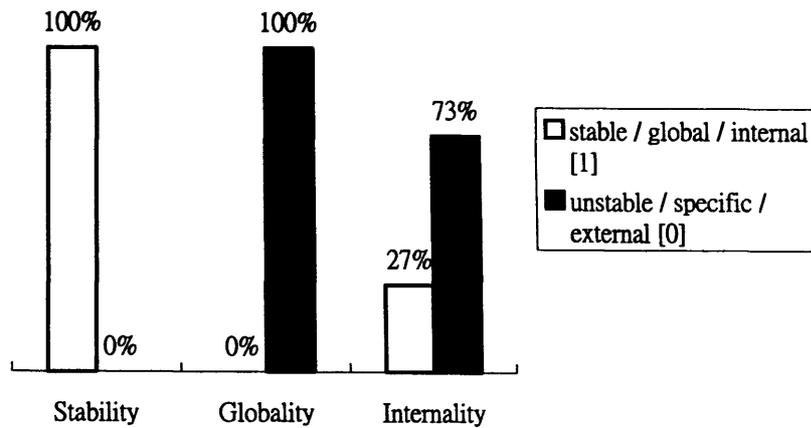
		Agents				
		speaker	pupils	official advocacy	parents	Total
Targets	pupils	6	13	2	0	21
	colleagues	1	1	0	0	2
	parents	0	2	0	1	3
	Total	7	16	2	1	26

Frequencies from the above table show that the speaker, pupils, official advocacy and parents are identified as the agents, and pupils as the main source of causes (16 times) most likely to exert influences in the verification process. On the other hand, the pupils, colleagues and parents are the targets (being influenced by the causes) at this stage. Again, pupils are the chief target (21 times). The data suggest that the pupils are the principal agent as well as target at this creativity stage.

### (2) Coding attributions on causal dimensions

The following figure depicts the proportion of attributional codes generated from the selected teachers:

Figure 5 Percentage of attributions for dimensions (Stage Four)



The above figure shows that the speakers perceived all causes of attributions to be stable (100%) and specific (100%). More than two thirds of the causes are external. This might mean that the speakers perceive that the causes influencing the verification process are applicable to the future creative events (stability), are task-specific (globality) and derive mainly outside from the speakers (Internality). More details of these causal perceptions are discussed in the section on content coding below.

### (3) Content Coding

Table 14 Percentage of themes (Stage Four)

Themes	
1. creator's personal attributes	27%
2. pupils' learning characteristics	61%
3. outside school attributes	12%

Content coding of the causes shows that the amount of themes belonging to the creator's personal attributes (attitude and intention) is 27%, indicating less than one third of the perceived causes are internal. The pupil learning characteristics (61%) and the outside school attributes (12%) are external causes affecting the process of task verification. These external causes, which comprise official

advocacy, parental support, pupil learning process, learning context and learning outcome, are perceived by the speakers to have a relatively permanent influence on the criteria for verification, thus making 100% of the causes stable.

In response to the question why the promotion of pupils' betterment in learning was perceived as a criterion for task verification, the participants voiced that the outcomes themselves were evidence of successful teaching, joyful learning and progressive development of pupils:

*"The pupils are very attentive to my teaching when I am using the PowerPoint presentation. Their active listening is needed because I'd be reassured that my teaching is successful." (Interview 07)*

*"The pupils can overcome their weaknesses in sentence building. This evidence is overwhelming because it shows that I've achieved the stated learning objectives." (Interview 08)*

In the above quotations, the participants suggested that efficient and effective learning was the outcome of the teachers' success in teaching. Probably, they perceived that their intention to succeed caused them to propose better learning as one of the criteria for task verification.

*"The pupils are actively involved in the task activity. Their performance is pleasing because they are happy and committed - rather uncommon for routine class teaching." (Interview 16)*

*“The increase in pupils' interest is undoubtedly a positive indication because it shows the pupils learn more joyfully.” (Interview 05)*

The above statements portray a joyful classroom context in causal elements. This cause is perceived to have aroused an amiable classroom atmosphere conducive to better learning.

*“The pupils have the courage to face various challenges. The attitude is vital because they can develop their potential further.” (Interview 03)*

*“Pupils can understand the concepts more thoroughly after they have gone through the task. Such an understanding is important because the pupils can develop more confidence to tackle similar problems thereafter.” (Interview 09)*

The above causal elements suggested that progressive development in pupils' learning was noticeable. This phenomenon provides the basis for enhancing pupils' learning outcome.

The above paragraphs have highlighted the perceived causes for treating promotion of pupils' betterment in learning as a criterion for task verification. In addition, there are also causal perceptions of the need to gain support from parents:

*“The parents are actively involved in the task activity. Their enthusiastic participation is necessary because the pupils will probably be more willing to learn together with them.” (Interview 11)*

*“The participation of parents is unexpectedly high. Their responses are necessary because the pupils will work harder in the presence of their parents.” (Interview 05)*

Some participants perceived that involvement of parents in the task is necessary for task verification. They considered that their support could help to secure pupils' commitment to learn.

In addition to the need for parental support, pupils' improvement and active participation, adherence to the official advocacy might be causal:

*“The pupils' improvement is taken as a criterion because it is in fact a target prescribed in the official syllabus.” (Interview 08)*

*“The pupils are willing to carry out the task. Such a willingness is needed because the syllabus has prescribed such an attitude in its teaching objectives.” (Interview 11)*

The speakers seem to suggest that the official syllabi play a crucial role in influencing task planning, implementation and evaluation. Also, adherence to the subject syllabi indirectly legitimized pupils' participation in the tasks.

All in all, the attributional dimensions of perceived causes given in response to the question “Why do you think that such criteria are needed for verification?” are stable [1], specific [0] and inclined to be external [0]. Overall, pupils are perceived as the chief agent and target at this verification stage. Accordingly, it is perceived that evidence for the promotion of pupils' betterment in learning are

needed for task verification. This evidence is desirable because it can manifest successful teaching, joyful classroom context and pupils' progressive development in learning. In addition, parental support is necessary because it can help to secure pupils' commitment. Lastly, adherence to subject syllabi might as well be perceived as an official verification of the tasks.

### 5.6 Coding of causal perceptions about Stage 5

At this Communication Stage, the participants submitted the proposals to their school heads, presented them before their colleagues and then other teachers in the Creative Teaching Campaign. The result of the Phase One study indicates that at this stage, the participants successfully communicate their creative ideas in accordance with the four criteria suggested by Simonton (1988) – similar mental elements, shared needs, configuration for delivery and translation strategies. In the Phase Two study, the following questions were posed to elicit the teachers' causal perceptions in relation to this creativity stage:

*“How do you introduce your creative task to colleagues/other teachers/the Campaign?”*

*“Why do you think that the way you present your task to others is appropriate?”*

On above questions, 31 statements of causal perceptions were identified, extracted and coded. The data are presented and analyzed below.

#### (1) Personnel Coding

Table 15 Frequency of attributions for agent and target (Stage Five)

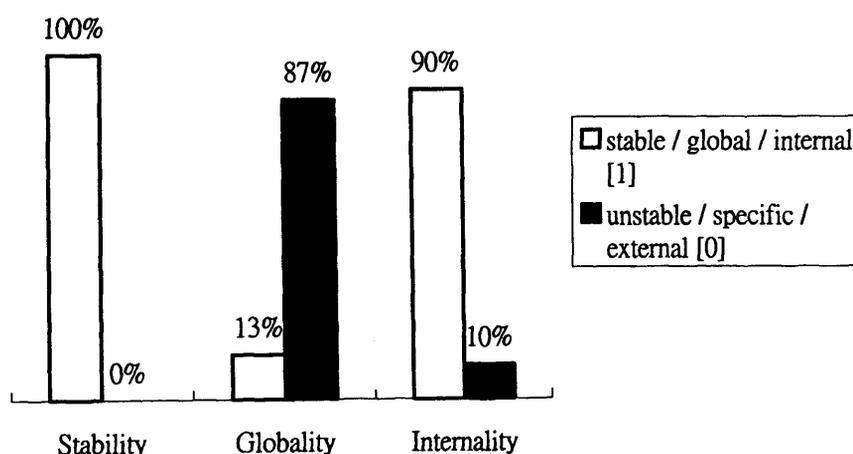
		Agents		
		speaker	colleagues	Total
Targets	speaker	30	1	31
	Total	30	1	31

The frequency table above shows that the speakers are a class of leading figures that influences (30 times) or is influenced (31 times) by the creative events in related to this creativity stage. In short, the speakers are the chief agents as well as the only target. Other than the roles of agent and target played by the said speakers and a colleague acting as the lone agent, no other agents or targets are identified. In other words, the participants perceived that when they presented their creative tasks to other members of their field, they were the ones to commence communication in ways they deemed appropriate. As they were the persons actively involved in the whole process, they saw it fit for them to be held responsible for all the consequences.

## (2) Coding attributions on causal dimensions

The following figure depicts the proportion of attributional codes generated from the participants:

Figure 6 Percentage of attributions for dimensions (Stage Five)



The above figure shows that the speakers perceive all causes of attributions to be stable (100%). Most of them are specific (87%) and internal (90%). This appears

to suggest that the speakers perceive the causes explaining task communication to be all applicable to the future creative events (stability), mostly likely to be applicable to the events mentioned (globality) and, lastly, largely derivable from within the speakers (Internality). These causal perceptions are to be further analysed in the section on content coding below.

### (3) Content Coding

Table 16 Percentage of themes (Stage Five)

Themes	
1. creator's personal attributes	90%
2. school characteristics	10%

Content coding of the causes shows that the amount of themes belonging to the theme of creator's personal attributes is 90%, indicating a majority of the perceived cause are internal. These personal attributes are the speakers' intentions and self-perceptions concerning task communication. The school characteristics (10%) are external causes explaining why the ways of communication are appropriate. These external causes originate from the duties assigned by school and are perceived as global and stable.

In response to the interview questions, the participants followed the same line of thought written in their narratives and then furnished the speakers with more concrete examples. Details of the ways of communication and the causal perceptions of their appropriateness are as follows.

To convey the creative ideas to other teachers, the speakers first sought out targets with similar mental elements or background, namely a shared body of

experiences, techniques, concerns and values. For example, the speakers presented their creative proposals in the format of a lesson plan that was familiar to most teachers. In the Phase Two study, the participants pointed out that colleagues with intimate relationship (i.e. shared experience) and those dedicated to the school vision (i.e. similar values) were their targets for task communication:

*“I introduce my task to my friends [colleagues with close relationship] first because we have the trust and care among us.” (Interview 02)*

*“I introduce the task to my friends [ditto] first because I think they trust me and are more willing to try the task.” (Interview 22)*

The participants established an amiable relationship with the appreciators such that they have the mutual trust and care to facilitate task communication. In addition, a shared vision for school improvement is also causal to this communication process:

*“I [a senior teacher] talk to the other senior teachers in the administration meetings because we share the same vision for school improvement.” (Interview 15)*

*“... because I understand that colleagues supporting the school vision and mission will be more committed to work.” (Interview 05)*

The above quotations indicate that colleagues having similar vision and mission on schoolwork is perceived as an important element for successful communication of the creative tasks. In the following section, the aspect of why the fulfillment of teachers' needs is suitable is explored.

In the Phase One study, the participants voiced that in task communication, they highlighted the common problems and needs at school so as to arouse the appreciators' empathy for their creations. Additionally, in Phase Two, they specified that the need to help teachers fulfil the latter's assigned duties was essential:

*"I share my experience with my math colleagues because we are asked to have these routine meetings every week." (Interview 11)*

*"I introduce my task in the panel meetings because we'll be available to share experience during the scheduled staff meetings." (Interview 17)*

A closer look at the above causal elements reveals that the assigned duties are targeted because of the availability of time for task sharing. Furthermore, the assigned duties can also ensure that only teachers with similar expertise and expectation are addressed:

*"I discuss my task in the subject panel meeting because I realize that colleagues of the same subject will have the similar training and expectation to do the task."*

*(Interview 11)*

*"I show them [teachers of the same subject] the lesson plans because I suppose they know how to modify these plans and adapt them to the standard of their pupils."*

*(Interview 14)*

In sum, teachers assigned on related duties are targets to be approached by the participants for task communication because they have the time, expertise and motivation to share and carry out the creative tasks. The following section is a discussion of the third aspect – the perceived causes concerning the appropriateness of the configurations.

The Phase One study shows that the participants have employed various media including written proposals, video-recordings and live performance to deliver their ideas to judges of the Campaign, colleagues and other local teachers. The speakers perceive that the causes for adopting these configurations for their tasks are twofold:

*“In the presentation, I play the video-recording of my pupils' performance of the task because other teachers can grasp the objectives and the procedural details.”*

*(Interview 19)*

*“I bring my pupils to the demonstration for the purpose of helping other teachers to understand the process and outcome of the task more clearly.” (Interview 21)*

The above quotations show that the speakers' choices of media are affected by their intention to help teachers understand the objectives and procedures of the creative tasks. Furthermore, they expect the configurations to present themselves as models for future replication:

*“I videotape the entire process [of the creative task], expecting other teachers to follow suit.” (Interview 09)*

*“I prepare every detail of the task content. I think other teachers can use these illustrations and examples for replication.” (Interview 04)*

The section above describes the causal perceptions about the mental elements, needs and configurations in relation to task communication. The following section is to analyze the last aspect – translation strategies:

For successful communication, the creators must translate and present the initial conception such that the appreciators can understand and undergo experience similar to what the former have been through. Findings of the Phase One study show that the participants present the creative tasks through oral presentation, demonstrations and workshops. Step-by step procedures are given in order to ensure clear understanding of the tasks. The perceived causes of these translation strategies are as follows:

*“I carry out the task with the teacher participants because I suppose they will enjoy my demonstration and share my happiness.” (Interview 10)*

*“I ask the teachers to rehearse the task in front of a mirror because I am sure that they can get the fun out of it.” (Interview 11)*

Evidently, when introducing the tasks, the speakers attempt to motivate the appreciators intrinsically because the speakers perceived that they can arouse and sustain the appreciators' attention and interest.

*"I write down the design in detail with an intention to let other teachers understand the task more thoroughly." (Interview 03)*

*"I must give a live demonstration of the task because I think other teachers would like to grasp the process and effect of the task before trying it out in their classrooms."  
(Interview 11)*

*"I invite the teachers to sing the song with me because I want to give them the chance to carry out the task by themselves." (Interview 20)*

*"I promote the task through workshops because I am determined to establish lively and instant communication with the teacher participants." (Interview 08)*

The above quotations show that particular tactics like the work manual, demonstration, hands-on experience and instant feedback have to be employed in order to ensure the appreciators can understand the creative tasks.

Lastly, evidence of successful experience is related and choice of task materials is made with easy accessibility in mind to encourage attempts to replicate the creative tasks:

*"I videotape the entire process and the happy ending because I'm trying to give them more confidence to do the task again." (Interview 09)*

*"I promote the task through workshops because I want to illustrate the task with my successful experience and encourage further attempt by other teachers."*

*(Interview 08)*

*“I have saved the task material in the school server [mainframe computer] because I want my colleagues to access the material and guidelines easily.” (Interview 07)*

Overall, the participants perceive that an appropriate task translation begins with an intention to motivate the appreciators to learn the creative tasks. The learning process is further facilitated by the creators' employment of various strategies to help the appreciators acquire clear understanding, first-hand experience and instant feedback. Lastly, with evidence of success in implementing the tasks and choice of easily accessible materials for the tasks, the creators can encourage the appreciators to follow their examples of creation.

To conclude, the Phase Two study indicates that attributional dimensions of perceived causes in response to the question “Why is the way you present your task to others appropriate?” are stable, mostly specific and inclined to be internal. Inasmuch as the speakers start off the communication process with ways they deem appropriate, they perceive that they have to be responsible for consequences arising from this stage. Content coding shows that the causes of presenting similar mental elements, needs, configurations and translations are related respectively to (1) mutual trust and shared vision among colleagues, (2) availability of time, expertise and motivation, (3) clear presentation of objectives and procedures and (4) assured strategies to motivate, prepare and support further attempts of the creative tasks.

### 5.7 Coding of causal perceptions about Stage 6

The Phase One study reveals that the creative tasks reaching this Validation Stage must have met the criteria of originality, practicality and social worth (Davis, 1992). The findings show that these criteria necessitate freshness, effective teaching, compliance with the official curriculum as well as the promotion of child-centred ideology. The following questions were posed to elicit teachers' causal perceptions with respect to such findings:

*“What are the criteria that make your creative teaching be validated as outstanding?*

*Why do you think that these criteria are necessary?”*

In response to the above questions, 30 statements of causal perceptions were identified, extracted and coded. The respective results and analysis are as follows:

#### (1) Personnel Coding

Table 17 Frequency of attributions for agent and target (Stage Six)

		Agents	
		Speaker	Total
Targets	speaker	4	4
	pupils	1	1
	official advocacy	2	2
	teachers	14	14
	Task requirement	9	9
Total		30	30

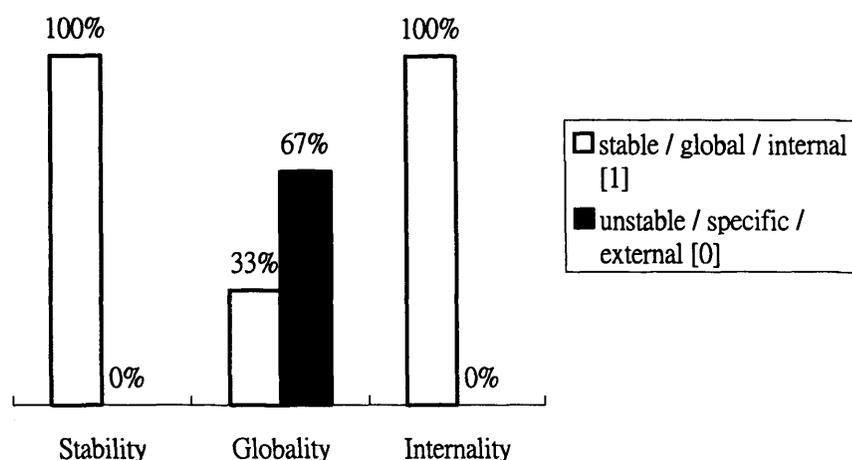
Frequencies from the above table show that the speakers describe themselves more as agents (30 times) than as targets (4 times), indicating that they perceived themselves to influence, rather than to be influenced by, the creative outcomes. As far as validation is concerned, the speaker is the lone agent (30 out of 30). This might suggest that the speakers perceived themselves to play an indispensable role

in causing the validation of the criteria as appropriate. When targets are considered, the teachers-category (14 times) is the most frequently referred to target, indicating that it is a dominant target when the causes of validating criteria are considered.

## (2) Coding attributions on causal dimensions

The following figure shows the proportion of attributional codes generated from the selected teachers:

Figure 7 Percentage of attributions for dimensions (Stage Six)



The above figure indicates that the speakers perceive all the causes as stable (100%). About 2/3 of the causes are task specific and the remaining 1/3 global. The high percentage of specific causes might be due to the nature of the process at this stage, which is to validate the specific creative tasks. That the causes were 100% internal indicates that all the causes derived from within the speakers. More about these causal perceptions are discussed in the section on content coding below.

### (3) Content Coding

Table 18 Percentage of themes (Stage Six)

Themes	
creator's personal attributes	33%
creator's task design	67%

The theme of 'creator's task design' in the frequency table above refers to the intention of the speakers shown in their design of the creative tasks in the present study. Specifically, its theme manifests the speakers' intention to demonstrate that their creative tasks meet the criteria of originality, practicality and social worth. Accordingly, it (67%) coupled with the creator's belief, self-perception and attitude (33%) makes all the causes internal.

Responding to the question on why certain validation criteria were necessary, the speakers reiterated many of the personal beliefs and values mentioned in their narratives. Some additional criteria and their causes were also discussed during the interviews. The section below will furnish the previous phase of study with the causal perceptions concerning practicality, originality and social worth of the creative tasks.

In the Phase One study, the participants highlighted effective learning as the major focus of task practicality. When asked on the causes for such a criteria, some participants replied:

*"... because my job is to ensure effectiveness in pupil learning." (Interview 05)*

*"We are devoted to promoting effective learning because I think that it is our mission to*

*do so.” (Interview 06)*

The quotations show that speakers perceive that effective learning is highlighted in practicality because they take teaching as a mission. In addition to this causal perception, they put forth two other causes in relation to their context of teaching:

*“This package is useful for teachers because it is a time-saver.” (Interview 02)*

*“... because its preparation won't then take up so much of the teacher's time.”*

*(Interview 03)*

These comments echo the work constraints often mentioned by the participants during the interviews. Probably, time is a precious resource in the school context such that the factor of timesaving carries enormous weight in task validation. Likewise, easy task implementation is highlighted:

*“The task is simple, easy and effective for teaching. These attributes are practical because they can facilitate the teacher's implementation of the task.” (Interview 20)*

*“The practicality of the task has been considered. It is then welcomed by many teachers because its simplicity would not impose too much extra workload on them.”*

*(Interview 16)*

Obviously, simplicity of task implementation is also a quality aspired to by teachers who have a busy school life to contend with.

In the Phase One study, task originality is reflected by freshness and excitement experienced by pupils and teachers. It is the other aspect of the speaker's causal perceptions that the next section needs to look into:

*"The creative tasks must be novel because there should be no plagiarism."*

*(Interview 10)*

*"There should be some kind of freshness in the creative tasks because creative teaching allows no conformity. (Interview 19)*

The speakers perceive that freshness is needed because creative teaching by its nature is novel and unconventional. Additionally, they regard freshness and excitement as a source of motivation for pupils' learning:

*"We teach the usual content in an unusual way because I understand that our pupils will feel bored when we teach without variations." (Interview 21)*

*"The creative task should be something that we have not had before because it can attract our pupils to join the activities." (Interview 05)*

Furthermore, some participants perceive that the acquisition of task originality is a way to professional development:

*"Creative teaching involves more thoughts and imagination because we take creative teaching as a means to professional development." (Interview 04)*

*“I like to create tasks from daily life material because the originality of using common objects for an uncommon activity would improve my expertise in teaching.”*

*(Interview 03)*

As far as the third criteria – social worth is concerned, result of the Phase One study draws our attention to the promotion of joyful learning, the compliance with official advocacy and the adherence to the principle of child-centredness. The causal perceptions of these ideals are elaborated below.

Some participants perceived that joyful learning is promoted to enhance pupils’ motivation in learning:

*“The creative task can help pupils to learn in a joyful manner because it will counteract pupils' boredom and inattentiveness.” (Interview 14)*

*“The creative task must be interesting because it serves to motivate pupils to learn.” (Interview 20)*

Joyful learning is also a source of job satisfaction for the speakers:

*“I always want to be happy together with the pupils because I consider pupils' joyful learning a source of job satisfaction.” (Interview 06)*

*“... because helping them to learn is our principal source of happiness.” (Interview 17)*

As for official advocacy, some speakers state that the cause derives from their

school missions:

*“The task stimulates the whole staff of the school to work together. This stimulation is welcome because the task can exemplify the whole-school approach [an official advocacy] - one of our school goals.” (Interview 05)*

*“Parents are invited to take part in the task. This home-school relationship is cherished because it is an official advocacy as well as our school missions.” (Interview 11)*

Obviously, when the above participants implement their tasks, they have to take into account the school mission. In doing so, they are at the same time pursuing what is promoted officially. In other words, the creative tasks fall in line with the official advocacy, showing that the creative tasks are the evidence of schools' effort in putting the official advocacy into practice.

Lastly, in reply to the question why child-centredness is one of the criteria for task validation, the participants express that it is their belief that pupils' learning should start from real life contexts of which school life is one of the most important elements:

*“Such a subject integration is appropriate because it resembles a daily life activity, and is more closely related to pupils' life experience.” (Interview 15)*

*“The task is child-centred. It requires the pupils to search information from their own contexts. This approach is appreciated because it helps the pupils to learn from real life situations.” (Interview 05)*

They also mention that the child-centredness serves to cater for pupils' individual difference. This cause works hand-in-glove with the task intention to overcome pupils' learning difficulties expressed in the Phase One study:

*"... because it is designed to ask our pupils to make comparisons with their previous performance, rather than with others." (Interview 22)*

*"The task is divided into three stages according to their prior knowledge. The teachers need such hierarchies because it can cater for the children's varying abilities." (Interview 03)*

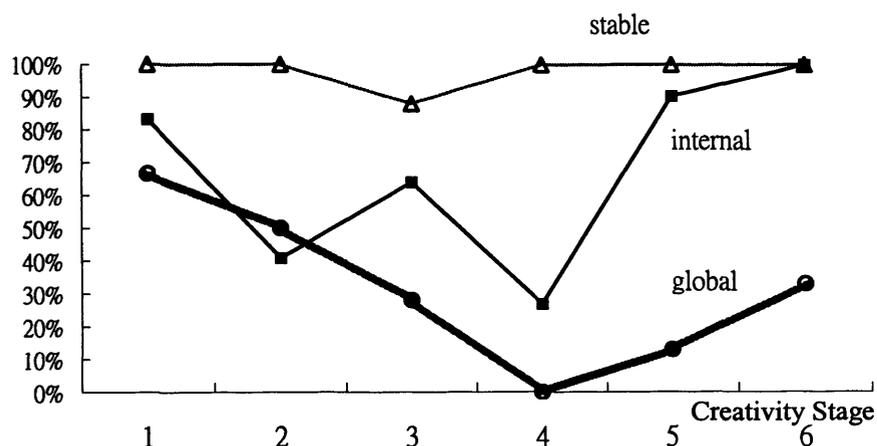
In sum, the attributional dimensions of perceived causes given in response to the question "Why are the criteria necessary for task validation?" are all stable [1], mostly specific [0] and largely internal [1]. On the criteria of task practicality, the pupils' joyful learning is felt to be needed because it is perceived as a teacher's mission and a source of job satisfaction. Saving of time and ease of implementation are also described as practical because they lend support to tackling the contextual constraints at school. Originality helps to motivate pupils' learning, to promote teacher development and the speakers to define the nature of creative teaching. Official advocacy, often rewritten as school missions for teachers to accomplish, is perceived to be enforceable and actionable when participants implement their creative tasks. Furthermore, joyful learning, child-centredness, and some officially advocated ideals are perceived to be favourable to pupils' learning of creative tasks because they meet the criteria on social worth.

### 5.8 Comparison of attributional dimensions at the six stages

So far, the personnel coding, dimension coding and content coding of the individual creativity stages have been presented and analyzed. In order to give an overall picture of the attributional dimensions across the six creativity stages, the following graphs are plotted to represent the percentages of stable, internal and global causes at these stages:

Figure 8

A comparison of the percentages of stable, global and internal causes across the six creativity stages



For the sake of comparability across different stages, the frequency counts of the three types of causes (stable, internal and global) at each stage have been converted into percentages to stand for the respective proportions of codes at that particular stage. The graphs plotted above might suggest:

1. **Stability** – The causes across the six stages are almost 100% stable. The slight dip found at Stage 3 (Illumination) is due to the causal elements deriving from

the Creative Teaching Campaign and the community centre. Their one-off nature has made the respective causes unstable. Other causes are perceived as stable in the entire creative process.

2. **Internality** – The curve fluctuates enormously, indicating that the internality of the attributional statements is far from uniform across the six stages. The two troughs located at Stage 2 (Incubation) and Stage 4 (Verification) might suggest that external causes come into play during problem formulation (Stage 2) and task confirmation (Stage 4).
3. **Globality** – The percentage of global causes falls from 67% at Stage 1 to reach the lowest point (0%) at Stage 4 (verification) and gradually rises to 33% at Stage 6. This might suggest that as the creative process develops, the causes are becoming more and more task specific. Globality reaches a minimum at Stage 4. It rises a little after Stage 4 but still remains at a low level for the last two stages.

The above sections have presented the result and analysis of the Phase Two study. They follow the Leeds Attributional Coding System to explore the teacher participants' causal perceptions of their practice of creative teaching. The analysis begins with an overall discussion on the entire creative process and then moves on to look into causes related to individual creativity stages. Throughout the analysis, the personnel coding, dimension coding and content coding are presented and analysed. A comparison of the attributional dimensions across the six stages has been made, too. Overall, the teacher participants perceive themselves as the principal agent and target in the practice of creative teaching. The attributional pattern in general tends to be stable-specific-internal [101]. However, across the

various Cropley's creativity stages, the attributional patterns vary. The content analysis of the statements derives six themes in which a majority of the themes are perceived to be derived from within the teacher participants. A summary of the findings is detailed below for easy reference.

## 6. Chapter Summary

This chapter presents the result and analysis of the two phases of studies. The first two tables list findings derived from Kainan's framework in the Phase One study. These tables provide an overview of how the participants describe their creative teaching as well as their perceptions on the nature of creative teaching:

Table 19 Summary of findings from Kainan's framework in the Phase One study – how teachers describe their creative teaching.

Narrative Structure	Findings
Background	<p>The creative tasks reflect participants' intentions to fulfil the needs and expectations perceived at work.</p> <p>Task objectives are highlighted to gain mutual understanding and facilitate future replication.</p>
Problem	<p>Problems arise from the pupils' misbehaviour, their learning difficulties and the lack of resources.</p> <p>Effectiveness in teaching is considered.</p>
Battle	<p>More favourable content, pedagogy, and context are created to tackle the perceived problems.</p> <p>Teachers tend to be more tolerant, open-minded and liberal in teaching.</p>

**Table 20 Summary of findings from Kainan's framework in the Phase One study – perceptions on the nature of creative teaching**

Narrative Context	Findings
Generalization	<ol style="list-style-type: none"> <li>1. Creativity is every teacher's potential. Teachers should cultivate and develop this endowment.</li> <li>2. Creative teaching is fun.</li> <li>3. Creative teaching can initiate active and meaningful learning.</li> <li>4. Creative teaching can satisfy the developmental needs of children.</li> <li>5. Creative teaching necessitates teachers' knowledge and commitment.</li> <li>6. Creative teaching is rewarding.</li> </ol>
Advice	<ol style="list-style-type: none"> <li>1. Make creation a work habit and the source of satisfaction</li> <li>2. Organize creative tasks to arouse pupils' interest in learning.</li> <li>3. Act creatively to provide concrete experience and subject integration.</li> <li>4. Create a supportive environment with proper guidance and feedback.</li> <li>5. Be sensitive to pupils' behaviour and cater for individual differences through creative activities.</li> <li>6. Model creativity in teaching to facilitate pupils' learning.</li> </ol>

In the Phase Two study, the teacher participants perceive themselves as the principal agent and target in the practice of creative teaching. The attributional pattern in general tends to be stable, specific and internal, i.e. [101]. However, the attributional patterns vary across individual stages. Content coding derives a variety of categories which are clustered around six themes.

The following eight tables summarize the findings derived from the Cropley's framework (1997). Each table belongs to one of the six Cropley's creativity stages with the Phase One findings listed on the left and the Phase Two findings on the

right:

**Table 21 Summary of findings of both phases (Stage 1 - Information)**

Practice of Creative Teaching	Causal Perceptions about the Practice of Creative Teaching
<ol style="list-style-type: none"> <li>1. Teacher knowledge of general pedagogy and subject content are necessary.</li> <li>2. Personal attributes like patience, interest, curiosity and determination to improve oneself are vital.</li> <li>3. Long periods of time may be necessary.</li> </ol>	<ol style="list-style-type: none"> <li>1. Teacher knowledge is needed to provide the basis and the necessary confidence for task preparation.</li> <li>2. Patience is required for task planning. The selected teachers' preference for happiness at work leads to an interest to create. Their willingness to change and the intention to gain colleagues' recognition arouse the determination for self-improvement.</li> <li>3. The prerequisite for time is needed to tackle constraints and dissatisfaction at school.</li> <li>4. The creative practices at this stage are perceived as self-initiated and self-responsible.</li> <li>5. The attributional pattern tends to be stable-global-internal [111].</li> </ol>

**Table 22 Summary of findings of both phases (Stage 2 - Incubation)**

Practice of Creative Teaching	Causal Perceptions about the Practice of Creative Teaching
<p>The creative teachers change the stereotyped viewpoints and go through systematic cognitive processes to formulate and solve the problems in their classrooms. The main problems stem from:</p> <ol style="list-style-type: none"> <li>1. Pupils' lack of interest to learn</li> <li>2. Pupils' learning difficulties; and</li> <li>3. Some outside classroom contexts</li> </ol>	<ol style="list-style-type: none"> <li>1. To cope with pupils' lack of interest to learn, the teachers' intentions to arouse pupils' positive responses and their constructive attitudes towards the teaching career are causal.</li> <li>2. In response to pupils' learning difficulties, the selected teachers transform their approaches because they want to ensure pupils' academic attainment.</li> <li>3. Compliance with the prescribed school curriculum and the official advocacy are also the perceived causes to incubate the creative events.</li> <li>4. Between teachers and pupils, the participants are the ones to change more if the classroom problems are to be faced and tackled in new ways.</li> </ol>

	5. At this stage, all causes are stable but tend to no extremes in globality & internality [1--].
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**Table 23 Summary of findings of both phases (Stage 3 - Illumination)**

Practice of Creative Teaching	Causal Perceptions about the Practice of Creative Teaching
<p>The facilitating forces leading to Stage 3 are an amalgam of environmental pressures and personal attributes to fulfil:</p> <ol style="list-style-type: none"> <li>1. Organizational duties</li> <li>2. Professional requirements</li> <li>3. Personal expectations</li> </ol> <p>Flexibility is a key attribute.</p>	<ol style="list-style-type: none"> <li>1. The management of school duties are influential because with clear delineation of duty and with proper delegation of authority, the selected teachers are empowered to work with other colleagues to generate the creative tasks.</li> <li>2. The nomination for the Creative Teaching Campaign is important because the Campaign provides an impetus to produce the tasks.</li> <li>3. The attributes in terms of concern for the pupils' learning outcome, affinity for challenges and being collaborative with colleagues are important causes of task generation.</li> <li>4. The flexible use of teaching approaches and content might be stimulated by the selected teachers' determination to instil active learning in their pupils.</li> <li>5. The selected teachers are the principal agents to generate the creative tasks.</li> <li>6. The attributional pattern tends to be stable-specific-internal [101].</li> </ol>

**Table 24 Summary of findings of both phases (Stage 4 - Verification)**

Practice of Creative Teaching	Causal Perceptions about the Practice of Creative Teaching
<ol style="list-style-type: none"> <li>1. The creative tasks, like normal teaching activities, work well with every other teaching practice to promote the betterment of pupils' learning.</li> <li>2. Teachers' knowledge and action to gain support from members of the educational field are indispensable.</li> <li>3. The creativeness of the selected</li> </ol>	<ol style="list-style-type: none"> <li>1. Promoting the betterment of pupils' learning is desirable because the selected teachers can then show the advantages related to successful teaching, joyful classroom and pupils' progressive development in learning.</li> <li>2. The support of parents is necessary because it can secure pupils' commitment.</li> </ol>

<p>teachers is classified as 'technical creativity' – level 2 in Taylor's five-level framework.</p>	<p>3. Adherence to subject syllabi might be perceived as an official verification of the tasks.</p> <p>4. The pupils are the principal agent and the main target for task verification.</p> <p>5. The attributional pattern tends to be stable-specific-external [100].</p>
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**Table 25 Summary of findings of both phases (Stage 5 - Communication)**

Practice of Creative Teaching	Causal Perceptions about the Practice of Creative Teaching
<p>1. The selected teachers can successfully communicate their creative ideas to the judges, colleagues and other teachers in accordance with the four criteria suggested by Simonton (1988) - (1) Similar mental elements among teachers and colleagues; (2) needs to fulfil the school duties; (3) configurations using various media and (4) translation strategies</p>	<p>1. The causes of locating targets with similar mental elements and needs are related respectively to (1) mutual trust and shared vision among colleagues, (2) availability of time, expertise and motivation, whereas the causes of presenting appropriate configurations and translations are related respectively to the (1) clear presentation of objectives and procedures and (2) motivation of, preparation of and support for the appreciators' further attempts of the creative tasks.</p> <p>2. The selected teachers are committed to the whole communication process and bear the consequences that might prop up.</p> <p>3. The attributional pattern tends to be stable-specific-internal [101].</p>

**Table 26 Summary of findings of both phases (Stage 6 -Validation)**

Practice of Creative Teaching	Causal Perceptions about the Practice of Creative Teaching
<p>All creative ideas are endorsed with reference to criteria comparable to those postulated by Davis (1992):</p> <p>1. Practicality – to arouse joyful learning; to overcome constraints at work</p> <p>2. Originality – to be perceived by pupils and/or teachers in the Campaign</p>	<p>1. In response to the criteria for task practicality, joyful learning is cited because it is perceived as a teacher's mission and a source of job satisfaction. Saving of time and ease of implementation are also considered as means to tackling the contextual constraints at school.</p> <p>2. Originality helps motivate pupils to</p>

<p>3. Social worth – to promote child-centredness and other ideals officially advocated</p>	<p>learn, to promote teacher development and speakers to define the nature of creative teaching.</p> <p>3. Child-centredness is perceived to be favourable to pupils' learning. Official advocacy is perceived to be enforceable and actionable as they are often quoted as school missions for teachers to accomplish.</p> <p>4. The selected teachers play a principal role in bringing about the validation of the criteria as legitimate. The teachers in the Campaign are the main target.</p> <p>5. The attributional pattern tends to be stable-specific-internal [101].</p>
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<sup>1</sup> Bracketed words are added by the writer for clarification

<sup>2</sup> One of the well-known charitable organization in Hong Kong

<sup>3</sup> Low socio-economical status

<sup>4</sup> Cantonese, a prevalent dialect in Hong Kong, is used as the media of instruction in local primary classrooms. The vocabulary and syntax of this spoken language are considerably different from the written language used in the essay writing.

<sup>5</sup> The function of plastic bags to carry things; the function of fishing to catch things and the function of coloured cards to regulate a soccer match all remain unchanged in their re-invention.

<sup>6</sup> IT represents information technology, including the application of computer hardware, software and the internet technology.

<sup>7</sup> See appendix for the themes and respective categories.

## **CHAPTER FIVE**

### **DISCUSSION**

The discussion chapter is outlined below:

1. Overview of the study and its major findings
  - 1.1 The research and its focus
  - 1.2 Major findings of the Phase One Study
  - 1.3 Major findings of the Phase Two Study
2. Discussion on the findings of the Phase One study
  - 2.1 Teacher creativity as a set of plots, principles and procedures
  - 2.2 Aspects of change to produce creative practices
  - 2.3 Creative teaching is effective and child-centred
  - 2.4 Overemphasis on child-centredness
3. Discussion on the findings of the Phase Two study
  - 3.1 Implications of personnel, dimension and content coding
  - 3.2 Enquiring into the low level of creativity
  - 3.3 Fostering teacher creativity at various levels of context
4. Critique of Cropley's stage approach to investigating teacher creativity
  - 4.1 Multi-faceted framework to study the creative process
  - 4.2 Demystifying the subconscious mental process
  - 4.3 Emphasizing the need for societal actions to complete the creative process
  - 4.4 Neglecting the potential creators
  - 4.5 Revision of the six-stage model
5. Chapter Summary

#### **1. Overview of the study and its major findings**

##### **1.1 The research and its focus**

This qualitative study focuses on how a group of Hong Kong primary teachers perceive their creative teaching in the classrooms. The study began with a

narrative analysis followed by an attributional study to explore the teachers' perceptions of creative teaching in general and then the perceptions of causality in particular. Although interpretations cannot be accurately projected outside such context, this inquiry can develop insights into the nature and directions of creative teaching in local schools. As mentioned in the introductory chapter, the following questions have guided the investigation:

1. How do teachers describe their creative teaching in the classroom?
2. What are teachers' perceptions regarding the nature of creative teaching?
3. How is creative teaching planned, implemented and evaluated?
4. What are teachers' perceptions about the causes of their practice of creative teaching?
5. How do teachers' causal perceptions affect their practice of creative teaching?

### 1.2 Major findings of the Phase One Study

The Phase One study explored the participants' perceptions of the beliefs and practice of creative teaching by analysing their personal narratives submitted to an officially funded campaign. Key findings are as follows:

The teacher participants perceived that

- (1) Creative teaching derived from a teaching and learning background to tackle certain classroom problems in an unconventional manner was an attempt to ensure effective teaching.
- (2) It was possible to reach some generalizations that illustrate the nature of creative teaching and recommend advice on the directions of developing such practices.
- (3) The practice of creative teaching was a maturational process undergoing sequential stages influenced by a combination of cognitive, affective and psychosocial factors.

### 1.3 Major findings of the Phase Two Study

Sequel to Phase One, Phase Two was a search for the participants' causal perceptions of creative practices in the classroom. The results of the personnel coding, attribution coding and content coding are as follows:

- (1) There existed shared perspectives on the causes of creative practices among teacher participants.
- (2) Distinct attributional patterns were found when the process of creation was considered as a single course of action or as a multi-stage process. Overall, causes were perceived as mostly stable and generally specific, whereas the internality varies.
- (3) Six themes derived from the content coding of the perceived causes.

The findings of the two phases of the study have been recapitulated as above while their implications are discussed next.

## **2. Discussion on the findings of the Phase One study**

The following sections will first refer to the findings on how creative teaching was described, the perceptions of the nature of creative teaching and the stages of creative teaching that suggest teacher creativity as a set of plots, principles and procedures. Subsequently, Alexander's framework (1992, 1995) will provide aspects of change to produce creative practices. Lastly, creative teaching will be proposed as a means to enhance teaching effectiveness as well as an attempt to meet the official advocacy of child-centred teaching. This section will end with a critique of the overemphasis on child-centredness by the teacher participants.

### **2.1 Teacher creativity as a set of plots, principles and procedures**

This section intends to argue that teacher creativity can be described, understood and learnt. In the present study, all narratives provided the plots with a common structure – background, problem and battle (Kainan, 1995). These plots presented the process and overall procedures of the participants' creative teaching. The background provided the objectives and needs of the creative tasks. The problems were formulated with respect to the processes of teaching and learning.

The battles involved classroom interactions in an attempt to ensure more successful school lives for both the pupils and the teachers. These plots described what, why and how the participants sought to become more creative teachers

Complementing the plots, the analysis of narratives produced a set of guiding principles that depicted the participants' perceptions about the nature of creative teaching. These principles included the generalization and advice that indicated the teachers' values and beliefs on creative teaching. They represented the basic assumptions, the means and guidelines leading to the teachers' creative acts to solve the perceived classroom problems. In addition, the application of Cropley's creativity stages (1997) organized the teachers' perceptions on how creative teaching was planned, implemented and evaluated. These stepwise procedures charted the course of producing the creative tasks for use in the classrooms. The present study showed that creative teaching products could be achieved through the following paradigm:

- (1) Accumulate relevant information of teaching and learning
- (2) Formulate pupils' problems
- (3) Commit to striving for new solutions
- (4) Verify the novel configurations at school
- (5) Communicate the creation to the field
- (6) Have the products validated by other teachers and subject specialists

The above-mentioned plots, principles and procedures illustrated that teacher creativity is perceived to be something that can be identified, analysed and communicated to others. In other words, creativity is not just a natural gift that leaves the unblessed to envy. It is treated as a concept that can be studied, better understood and put into practices. This is most encouraging because if creativity can be described by a set of plots, principles and procedures, and if they can be duplicated and taught to others, then all teachers can learn to be creative and subsequently add colour to their class teaching with more creative attitude and approaches.

It is fair to assume that certain innate abilities are conducive to creative practices. Apparently, there are teachers who are more creative than others.

However, when teacher creativity is seen as a methodological approach, teachers are then given an invaluable tool that will bring more excitement and satisfaction into their teaching. Accordingly, if teachers are willing to incorporate changes in their class teaching, they can indeed learn to be more creative. Such a perspective may end decades of routine classroom interaction and pave the way for learnable creative teaching. Nevertheless, motivating teachers to change their usual practices is not an easy task (Galton et al., 1999; Walker, et al., 2000). It is one of the potential problems in enhancing teacher creativity. Further discussions on the contexts that restrain or enhance creative teaching will be given in sections 3.2 and 3.3 of this chapter.

Having realized that teachers can learn to be more creative from a set of plots, principles and procedures, one may ask what changes should be implemented in the daily teaching if a teacher wants to be creative and apply this set of Ps. The next section will spell out the 'what to change' by referring to four major aspects of the practice of teaching.

## 2.2 Aspects of change to produce creative practices

Upon close examination of the narratives, the teacher participants modified their teaching in areas parallel to the four aspects of Alexander's practice of teaching (1992, 1995): content, context, pedagogy and management. Examples of changes in these teaching aspects are cited below.

The present findings indicated that the teacher participants modified their teaching contents to facilitate the all-round development of pupils. Their creative teaching revolved around the pupils' needs, interests and problems. Emphasis was laid on the application of unconventional pedagogy to promote self-initiated learning and pupils' active participation. The teaching strategies innovatively integrated the teachers' concern and interests with those of the pupils to facilitate effective teaching and learning. Harmony in class relationship was maintained through mutual respect and pupils' self-regulation. The teaching quality was assured by evaluating the process rather than the outcome of learning. Satisfaction

and enjoyment in the processes of teaching and learning were also emphasized. In short, having chosen their teaching materials, the selected teachers delivered them with some inspiring methods in unconventional classroom contexts. The management of learning was also evaluated in an innovative manner.

On the whole, the teacher participants conscientiously selected the teaching content, attended to the working context and were sensitive to the responses of pupils. Their teaching underlined the importance of pupils' involvement that led to learners' success in the classroom. When comparing such teacher behaviours with those found in conventional classrooms, the creative teachers initiated changes in areas corresponding to the four aspects of Alexander's practice of teaching (1992, 1995). In other words, teacher creativity can be applied and exemplified in these areas. Therefore, the content, pedagogy, context and management are the target areas of change that teachers can consider if they want to teach creatively in the classrooms.

### 2.3 Creative teaching is effective and child-centred

The section endorses the claim that creative teaching is perceived to be, on the one hand, effective teaching and on the other hand, capable of putting the official advocacy of child-centred teaching into classroom practices.

In the present study, all the narratives manifested perceptions that teacher creativity led to effective teaching. Understandably, creative teaching is often perceived as more or less equivalent to effective teaching because of some common characteristics shared by these two types of teaching. For instance, the characteristics of effective teaching like teachers' commitment to excellence, enthusiasm for teaching and assurance of pupil success (Jarolimek et al., 1997; Renzulli, 1992) are also found in the participants' perceptions of creative teaching. That said, there are fundamental elements in the participants' perceptions about creative teaching that go beyond effective teaching. In this study, the teacher participants alleged that they were involved in the production of effective novelty (Cropley, 2001) and surprise (Bruner, 1967) with the required ethicality (Eisenman, 1991) and practical value (Tardif et al., 1988) for their class teaching in mind.

Therefore, one may conclude that the creative teaching strategies under study not only bore the characteristics of effective teaching but also manifested the central elements of creativity – originality, practicality and social worth (Davis, 1992).

When the participants' creative teaching is compared with the teacher-directed practices generally found in Hong Kong classrooms, their intentions to promote child-centredness are remarkable and innovative. Their phenomenal determination and efforts in going against the tide deserve great appreciation particularly in light of the fact that the majority of Hong Kong teachers are still adopting didactic methods of teaching. The findings of the present study showed that creative teaching was perceived to be capable of helping fulfil the avowed official aims by engaging pupils in genuinely independent and self-initiated learning. With teacher creativity, ways to implement child-centred teaching became practical and applicable. The process and outcome of teaching became meaningful and satisfying, too.

All in all, the creative teaching in the present study was perceived to be effective teaching strategies that served to initiate and promote child-centred teaching. Such a practice is productive and positive (Cropley, 2001; Kasof, 1995). Nevertheless, the present inquiry revealed that the teaching philosophies behind all creative products were based on one extreme ideology – child-centred teaching whereas teacher-centred approaches were largely neglected. Further discussion on the overemphasis on child-centredness is presented below.

#### 2.4 Overemphasis on child-centredness

In the present Creative Teaching Campaign, there were practically no entries related to ideas on teacher-led activities, rote learning and firm classroom management. In fact, there were no nominations or submissions concerning recitation, drills, respect for teachers, strict discipline as well as promotion of pupils' patience and diligence. Understandably, when a teacher submits his/her creation for an officially funded selection campaign, s/he will have to take into account of the official aims and social expectations. Yet such unreserved leaning towards a single teaching approach as reflected by the one-sided nominations and

submissions is not only unsound in judgement but also has oversimplified the complexity of teaching and learning.

It is felt that the participants attempted to keep with the approach that was officially advocated. They might neglect their classroom reality and misinterpret that teacher centred approaches had no place in quality creative teaching. Galton et al. (1999) reminded us that the choice of pedagogy is made only after the nature of what the child is expected to learn is identified – not the other way round. The overemphasis on child-centredness overlooked the specific pedagogical requirements for particular nature of knowledge content, ages and stages of learning. Alexander (1994) also cautioned that teachers adopting child-centred practices albeit the difficult classroom circumstances or without thorough understanding and full commitment may fall into the trap of mediocre teaching. Furthermore, a study on distinguished teachers in China (China Education, 1997) revealed that teacher-centred approaches with typical emphasis on recitation, drills, application activities, stringent discipline and pupils' hard work can also be ways to facilitate meaningful and effective learning. Possibly, the demanding and didactic approaches are culturally appropriate for Chinese learners (Biggs et al., 2001; Dimmock, 2000 & Salili, 1996).

Nevertheless, in the present study, no creative ideas leading to teacher-centred activities were found. The teacher participants might have overlooked the complexity of teaching and have taken child-centredness as the only feasible approach of teaching. The prevalence of strict adherence to one single teaching approach limits the chance of success in classroom teaching and learning. Therefore, Hong Kong teachers should rectify this bias and should view the application of creative teaching from a broader perspective.

So far, the findings of this study have been reviewed and discussed with particular reference to the nature of teacher creativity, the target areas of change for producing creative practices and the attempt to meet official advocacies. A call to restore the balance between child-centred and teacher-centred approaches to creative teaching has been put forward too. It can reasonably be assumed that all creative teachers are willing to tackle and resolve challenges arising from their

daily teaching; yet there is little evidence in the Phase One findings to determine which personal traits, interpersonal relationship and organizational context are more ready to secure creative attitudes and approaches to teaching. In addition, the perceptions of causality that influence the practice of creative teaching have yet to be dealt with. All these aspects will be presented in the section below.

### **3. Discussion on the findings of the Phase Two Study**

The discussion now proceeds to the participants' causal perceptions of creative practices. The following sections will first shed light on the findings on coding of attributional statements. Next, the low level of creativity in Hong Kong will be looked into. Finally, ways to foster teacher creativity at various context levels will be suggested.

#### **3.1 Implications of the personnel, dimension and content coding**

Findings showed that the participants generally have shared perceptions about the causes of their creative practices. The implications are discussed below.

##### **(1) Personnel coding**

Personnel coding of attributional statements depicted the causal dynamics among person, group or entity. The present findings indicated that in general, the participants perceived themselves as the principal agent in the creative practices. Other agents like pupils, school, colleagues or other outside school entities played a comparatively minor role. In other words, the participants perceived that the causes of creative practices, on the whole, were self-initiated and self-maintained. They were the main character in their workplace to shape the emergence of the creative tasks. The finding that the participants generally perceived themselves as the principal target also means that the causes of the creative acts were most likely to affect themselves. Accordingly, the participants were of the opinion that they were to be influenced by and to bear the consequences of their own creative acts. Such heavy reliance on the teacher participants to take part in the causes and the outcomes of creative practice may, on the one hand, provide opportunities for creating tasks in self-determined, self-responsible ways but, on the other hand, may

imply that there is inadequate support from or participation by other school members. More discussion on the constraints caused by contextual interactions will be presented in later sections.

## (2) Dimension coding

The causal dimensions of the attributions described how teacher participants make sense of their experience in creative teaching and would probably influence their subsequent thought and behaviour. The analysis shows that different attributional patterns exist at various stages, e.g. [111] at Stage One, [100] at Stage 4 and [101] at Stage 5. The variation implies that the practice of creative teaching is perceived to be affected by a different combination of causes at different stages. More discussion on how these perceived causes might hinder or facilitate teacher creativity will be presented in later sections.

In the present study, the overall attributional pattern is [101]. It means that the participants' perceived causes tend to be generally stable, specific and internal. Despite the variation of attributional patterns across stages, globality of the perceived causes is generally specific. Such a view is natural because the entire creative process aims for the production of specific tasks. Global causes are prominent only at Stage 1 when many-sided experience from various school contexts is needed. The overall inclination for causes to be internal echoes the emphasis on the participants' ability and effort in task creation throughout the whole creative process. The emotional outcomes related to internal causes like happiness, pride and satisfaction are also evident in the creative process. Among these three dimensions, the stability of the perceived causes remains consistently high at all stages, implying the participants perceived that the causes to bring about creative teaching are mostly applicable to future creative events. This is encouraging for the replication of creative tasks because one can be more assured of the creative outcome once its respective cause is fulfilled.

When the attributional biases are considered, no attributional pattern recurs across the six stages, indicating no habitual tendencies in the participants' choice of causal dimensions. Therefore, the 'fundamental attribution error' and the 'self-enhancing' bias are not evident here. Throughout the process of creation, the

globality and internality of the attributional statements vary with time and situations. Different combinations of causal dimensions are generated to explain the creative events at particular stages. Apparently, the inclinations to specific and internal causes at certain stages demonstrate justifiable perceptions of causality to suit context, rather than a result of attributional biases. This phenomenon is consistent with Sternberg's (1995) and Amabile's (1995) claim that the creators' tendency to over-attribute their creative achievements to personal dispositions does not exist.

### (3) Content coding

Content coding provides the richness of meaning within the inquiry context. This study has located some twenty categories, which are clustered around six distinct themes. For instance, categories like the constraints at work, school tradition and the assigned duties are grouped under the theme 'school characteristics'. Furthermore, most of the categories like the speaker's intention, teacher knowledge, pupils' difficulties in learning, constraint at work, official advocacy etc. are perceived to be stable and thus have a direct bearing on future creative teaching undertakings.

In general, content coding indicates that the participants' creative acts are influenced by various internal and external causes in which a majority of them are internal. Accordingly, this writer would maintain that the whole creative process necessitates teachers' willingness and active participation. External forces coming from the workplace can be facilitating but not sufficient to accomplish the tasks. In addition, different combinations of perceived causes were cited to explain certain contexts of creative practice at school. Such a complicated interaction vividly illustrated that creative teaching involves a complex interplay between the child, the teacher and the context (Moyles, 1998). More discussion on such interplay will be presented in the following sections.

### 3.2 Enquiring into the low level of creativity

The present findings show that the participants' teacher creativity is restricted

to Level 2 of Taylor's 5-level creativity (1975). Their creativity style was adaptive rather than innovative (1989). Their tasks exhibited minor creativity (Mumford & Gustafson, 1988) and were only original modifications to existing ideas (Puccio, 1998). The following section seeks to explain the low level of creativity by looking into the three levels of school context (Munton, et al., 1999).

(1) Individual level of context

In this context, the low level of teacher creativity was attributed to the participants' lack of qualification and teacher training.

Contrary to common beliefs, the participants voiced that teacher creativity did not come about by chance but hard work. To teach creatively did not mean that they did not need to prepare. In fact, preparation and planning play central roles in their understanding of the teaching situation before coming up with appropriate, novel teaching methods. From Stage 1 onwards, the participants were required to work with great care and effort. Otherwise, their attempt might end up in failure and frustration. Inevitably, the creation necessitated a repertoire of teacher knowledge. This requirement of substantial knowledge for creativity agrees with the research findings of Cropley (2001), Feldhusen (1995), Langley et al. (1986), Simonton (1988), Snow (1986) and Walberg & Stariha (1992). However, the development of such a repertoire may not be favourable owing to the existing teacher qualification and training requirements in Hong Kong (Hong Kong Teacher Surveys, 2000).

One may argue that the knowledge base for subject teaching in the primary levels is not as important as that in the secondary. However, the present findings indicate that a broad coverage of subject knowledge, though not a sufficient condition, is necessary for the creative practice at various stages. The adaptive feature of their creativity suggested that the participants might not be wholly in command of the field such that they could face challenges from group members if they chose to innovate rather than adapt. They could have reached a higher level of creativity if they were well equipped with a variety of approaches, skills, methods and content knowledge of the subject disciplines they taught. Owing to the lack of necessary qualification and teacher training, the participants naturally regarded

creative teaching as a great challenge. This explains in part why they could achieve only a low level of creativity, even though they had the courage to try.

The low level of creativity was not wholly attributed to the participants' inadequacy in teacher knowledge since causes outside the individual context were also contributive. The participants might have displayed the lower level of creativity out of their concern not to deviate too drastically from their colleagues' accepted norms or simply because they were duty-bound to follow the restrictive teaching syllabuses and exam system. All these perceptions illustrate that the creative teachers are culturally adaptive and contextually sensitive to their school lives. Details are discussed in the paragraphs below.

## (2) Interpersonal level of context

In this context, the need for a psychologically safe interpersonal context and the lack of teacher collaboration were attributable to the low level of teacher creativity.

Although the participants did not show the "modesty bias" (Munton et al., 1999) by attributing the causes of creative practice to colleagues' contribution, they expressed that the collegial support and collaboration were indispensable. Such a need for amiable interpersonal context to enhance teacher creativity was in line with the findings of Anderson-Patton (1998) and Simplicio (2000). However, such favourable contextual setting is not common in Hong Kong schools (Tam, 2001).

Perhaps working with colleagues in a group is sometimes less productive than working alone when the group becomes too judgmental of new ideas. Nevertheless, the present participants yearned for the recognition, mutual trust and shared vision of their colleagues even when engaged in creative teaching. Evidently, the selected teachers were working in a traditional Chinese interpersonal context that stressed interdependence (Triandis, 1995) and mutual respect (Ng, 2001). At all times, they tried to maintain harmonious relationships with school colleagues and avoid losing face (Bond, 1991). Consequently, the teaching tasks created by them were just some modifications of existing ideas that did not deviate too far from the

colleagues' accepted practices.

In Hong Kong, there are few opportunities for teachers to build ongoing and collaborative learning relationships with colleagues in areas of common interest (Lam, 1999; Sin, 2001). Teachers rarely listen to others talk about teaching or watch other teachers teach. As a result, the lack of collaboration has substantially diminished the opportunity for the participants to learn from colleagues. Such an unfavourable context could have inhibited the participants' potential to attain higher levels of creative teaching.

### (3) Organizational level of context

In this context, cultural conformity at school and official control on teachers' work were attributable to the low level of creativity.

In schools, there are always well-established traditions and routines about how things should be done. School heads and supervisors might welcome minor creations but not the kinds of creativity that defy existing practice (Sternberg, 1999c). When teachers attempt creative teaching by breaking down conventions, few could escape criticisms from those upholding them. Radically unconventional practices are seldom received openly because of the potentially devastating consequences they might cause to pupils if they are not properly thought out and delivered. In such events, it is not just the creative teachers but also their respective seniors who are held accountable for the faults. Thus, teacher creativity departing from conventional pedagogies and having the potential of violating the classroom routines and syllabuses or leading to lowering of standards rarely have the permission of the seniors to proceed.

In the present study, the participants perceived that the generation of creative task necessitated clear delineation of duty together with proper delegation of authority. In other words, the participants alleged that they needed prior approval and empowerment from their school heads to try out new, creative ideas. Such behaviour demonstrated cultural conformity in a Chinese organization that subordinates are less likely to take individual initiative without a superior's

approval (Bond, 1991). Because of this cultural practice, the participants' creativity was regulated by their heads and influenced by the school traditions and routine practices. Accordingly, when the creative tasks were devised, adaptation rather than deviation from the well-tried methods were usually adopted. This explains in part why the participants' teacher creativity only reached the technical level. The situation was further reinforced by stringent official control on teachers' work.

The participants perceived that their creative practices were outcomes of their compliance with the prescribed school curriculum and the official intentions. Adherence to official subject syllabuses and the avowed school aims were also necessary in the design of creative tasks. In other words, their creative teaching was greatly affected by the official interventions. Such perceptions of official control on teachers' work reflected Yang's notion (1998) that teachers are employed and expected to act according to government policies and the school missions.

In Hong Kong, official control is exerting profound influences on every aspect of teachers' work like curriculum, pedagogy and evaluation (Brown, 1997; Hong Kong Education Department, 1990; Llewellyn, 1982). It is against this regimented context that all teachers teach in accordance with one single set of subject syllabuses. Following the adoption of officially approved curriculum packages and text materials class teaching became more standardized. These text materials prescribed the teaching content, approaches and schedules to teach. The unified tests and exams held at specific times of a year put an even tighter rein on class teaching. Consequently, the restrictive system left only room for the participants to make incremental change to their teaching based on current ideas (Sternberg, 1999c). Accordingly, the participants followed the official syllabuses to create teaching tasks by simply refining or modifying gradually from the prescribed curriculum. The creativity of their products thus failed to exceed Taylor's technical level (1975).

To end this section on seeking explanation for the low level of creativity, it is noted that the present study has no answers to the question about the effect of the participants' age level, gender and life experience on their development of teacher creativity. Specifically, the influences of their upbringing and schooling on the

levels of creativity have not been explored. Although these aspects are outside the scope of this research, future studies can probe further to validate these causes and find out the extent to which they may facilitate the attainment of higher levels of teacher creativity. In addition, the present study shows that by creative teaching, it did not mean radically new approaches to teaching. Rather, the types of creative teaching the participants had in mind were those repeatedly and successfully operable in the school setting. The existing classroom practices were the basis of their creation. Apparently, all of the above-mentioned causes were influential to the participants' creative practice of teaching. Overall, this writer would argue that the selected teachers are seeking a balance between the needs and conditions prevailing at various levels of context. They take sensible risks to create the teaching tasks at the level of creativity permissible under the circumstances. Higher levels of creativity are not attainable without first relaxing the constraints on different contextual settings.

### 3.3 Fostering teacher creativity at various levels of context

Despite the low level of creativity, the participants perceived that the creative practices helped enhance the effectiveness of teaching and learning. Their creative tasks also provided strategies to put the official intention - child-centred teaching - into practice. These participants overcame the constraints, succeeded in going through all creativity stages (Cropley, 1997) and experienced the satisfaction of creative achievement. Therefore, it would be worthwhile to know why they could push themselves beyond existing boundaries and adopted more flexible approaches to teaching. In the present study, the participants' causal perceptions of creative practices is definitely worth noting and will serve to formulate working hypotheses that aim to foster teacher creativity. The following section will discuss these perceived causes by examining the three levels of school context.

#### (1) Individual level of context

In this context, the casual attributions in focus are related to the perceived causes arising from within the participants. Their internal attributes that foster creative practices will be attended to.

The analysis in the preceding chapter showed that the participants possessed some special internal attributes that were favourable to task creation. These attributes were similar to some of the top ten characteristics of the “beyonders” identified by Torrance (1993) – being different, enjoying one’s work, sense of mission and courage to create; and also certain personal characteristics of creative college teachers found by Anderson-Patton (1998) and Renzulli (1992) – flexibility, intrinsic motivation, commitment and risk-taking. Insofar as these personal qualities are concerned, the findings support that the participants were intrinsically motivated to teach creatively. The elements of their attitude most fundamental for creative teaching were their will to succeed and interest in teaching better. Their tasks were created because they satisfied the participants’ curiosity, fulfil their urge to create, and were taken as a career goal to challenge their mental ability. That is to say, when the creative teaching becomes rewarding itself, the process can go on independent of external considerations (Amabile, 1996). Therefore, to foster teacher creativity at the individual level, making the creation self-rewarding is the key.

The present analysis also indicated that different personal attributes were emphasized at different creativity stages to provide an appropriate individual context for task creation. It is found that “willingness to change” and “preference for seeking happiness at work” initiated the process of creation at Stage 1; the “constructive attitudes towards the teaching career” incubated some potential ideas to handle problems in the workplace at Stage 2; the “concern for pupils’ learning” and “affinity for challenges” illuminated the novel configurations at Stage 3; the “pride and satisfaction” made the successful verification of the teaching tasks rewarding at Stage 4; the “commitment to help other teachers” promoted task communication at Stage 5 and finally the “inclination to originality” validated the tasks at Stage 6. The variety of perceived causes represented individual participant’s needs at different stages and they had to be met if the respective creative outcomes were to occur. It must be noted that in order to foster teacher creativity, the requirement of particular attributes at a specific stage is important. An unsuitable demand of personal qualities not only gives teachers excessive burden and caused them unnecessary anxiety, but it may even deter them from trying. For instance, encouraging teachers to show an “affinity for challenges”

without first developing a “willingness to change, preference for seeking happiness in task creation and constructive attitudes towards the career” will make the challenges threatening and obnoxious to the teachers. Also undue emphasis on “inclination to originality” at earlier stages will induce teachers’ unnecessary judgment and hinder the free flow of ideas. Therefore, to establish an individual level context favourable to creative teaching, the manifestation of the internal attributes relevant to a specific creativity stage should be encouraged and such encouragement has to be given consistently for all the stages.

To conclude the discussion on the context at this level, this writer would suggest that in order to foster teacher creativity, it is necessary (i) to make creation self-rewarding and (ii) to encourage the manifestation of the right personal attributes at the right stage.

## (2) Interpersonal level of context

In this context, the causal attributions in focus are related to the interactions between individuals. The participants’ relationships with their colleagues as well as with their pupils and their interactions will be discussed.

The present analysis showed that the perceived causes that brought off the creative outcomes included “attempting to gain colleagues’ recognition” at Stage 1; “being responsive to pupils’ learning difficulties” at Stage 2; “being collaborative with colleagues” at Stage 3; “establishing a joyful and committed class atmosphere” at Stage 4; “maintaining mutual trust and sharing vision with colleagues” at Stage 5 and finally “adopting a child-centred relationship in classroom” at Stage 6. In this sequence of causes, different perceived causes were required to establish an appropriate interpersonal context for different stages of creative teaching. Moreover, the relationships were mainly built between the participants with their colleagues and with their pupils. More details will be discussed below.

At Stages 1, 3 and 5, the participants perceived that different forms of collegial support made it easier for them to bring about the relevant creative

outcomes. In such a favourable interpersonal context, communication of creative ideas was effected not only because the participants became more focused on the process of creating, but also because they were exposed to the experience and expertise their colleagues might have in dealing with similar teaching tasks. It was through such sharing and collaboration that the participants learnt, adapted and created their own creative tasks. Such a finding suggests that in order to foster teacher creativity, teachers and their colleagues should share vision, exchange experience, expertise and work collaboratively in their schools or school districts. Mutual support through class observation, lesson demonstration, team teaching and mentoring need to be arranged for such purposes. Open recognition of the ability and effort in creative teaching is also indispensable. Aided by these collegial support and collaboration, a favourable working relationship would begin to emerge at the three said stages of creative practices.

At Stages 2, 4 and 6, the creative practices were perceived to be the outcomes of the participants' understanding and responses towards the pupils' learning. Their reactions to the pupils' learning difficulties, establishment of a joyful and committed classroom and maintaining a child-centred relationship all manifested their concern and love for their pupils. With an increasingly fast changing world, today's children are in some ways more sophisticated than previous generations'. They encounter learning problems growing in complexity by the days. Teachers would soon find themselves unable to cope with these problems if they do not upgrade their knowledge and skill. And at the same time, they should increase their understanding of and care for the pupils they teach. Teachers attempting to adopt a creative strategy must acquaint themselves with the best way to implement it so that their pupils can gain optimal benefits. Otherwise, their effort at risk-taking would go to waste with little being achieved in the way of meeting stated teaching objectives and pupils' needs. As hinted earlier, the present study indicated that the concern and care for pupils' learning are essential. Taking risks to create shows a teacher's courage, and accepting the responsibility reveals in him a sense of duty; but both noble acts would be meaningless if they are not mediated by genuine concern and care for pupils' learning and development. It is the teachers' concern and care for their pupils that transform these acts into powerful intrinsic motivators for teachers to engage in producing creative practices.

As a conclusion for this discussion, this writer would maintain that to foster teacher creativity, it is advisable to build up interpersonal contexts by (i) letting teachers undergo creative practices with the recognition and support from colleagues; and (ii) enabling the teachers to manifest their understanding of, concern and care for pupils' learning and development.

### (3) Context at organizational level

Organizational context deals with causal attributions pertaining to events or behaviours shared by individuals within school. The outside impacts on school are also included. The findings showed that the respective perceived causes facilitating the task creation include “measures to relieve burdens on teaching like heavy workload” at Stage 1; “reactions to curriculum prescriptions” and “assurance of pupils' academic attainment” at Stage 2; “empowerment to carry out the assigned duties” and “impetus provided by the Campaign to create” at Stage 3; “confining the tasks within the scope of official syllabuses” at Stage 4; “availability of other teachers who have the time, relevant knowledge and motivation to learn and try the tasks’ at Stage 5 and lastly “citing the creative task as proof that the school is run as officially advocated” at Stage 6.

At Stages 2, 4 and 6, the official advocacies like the avowed school aims and the subject syllabuses played crucial roles to incubate, verify and validate the creative practices. Obviously, adherence to the official advocacies legitimized the participation by teachers and pupils in these practices. Furthermore, the perceived cause “assurance of pupils' academic attainment” at Stage 2 satisfied the expectations of parents, school heads and supervisors. Probably, organizational support for creative teaching will only be given if it can be shown that these creative tasks agree with the official ideals and will produce good exam performance. However, it is imperative that education officials, school heads and teachers should first take a closer look at the methods of evaluation before using “performance in exam” as a basis for their action. Today, in many schools, tests and exams are relied on to justify the need for evaluation by claiming that they provide a sense of equity. Yet, performance in tests and exams is far from being a reliable

measurement of pupils' abilities and knowledge levels since it wrongly assumes the pupils under evaluation are homogeneous. If an educator's goal is indeed to correctly evaluate pupil performance, the exams and tests that assess unique pupils in an identical way can hardly qualify as an equitable measurement. The situation in Hong Kong schools is further aggravated by the existence of a unified curriculum and the high frequency with which the tests and exams are run. This excessively centralized and exam-oriented system coupled with the schools' duty to assure pupils' attainment exerts tight control on teachers' work. With these threats to their autonomy to teach, the teachers are fighting an uphill battle to keep their minds flexible and open. All in all, to foster creativity in teaching, this writer would argue that the existing curriculum and the exam system must change to allow teachers more autonomy to teach in their classroom.

At Stages 1, 3 and 5, the schools provided some favourable contexts such that the participants were relieved of the pressure caused by their work constraints, properly delegated to carry out the creative tasks, and given a chance to disseminate the task information to the field. Through these acts, their school heads not only met the requirement for engaging teaching staff in creative teaching, but they also identified and developed teachers who were willing and able to take the risks of creative teaching. Then the creative teaching campaign came along and acted as a springboard to project the interest of engaging teaching staff in creative practices to an organizational level. The participants are then provided with a chance to acquire the necessary knowledge and drive to create. In the context described, the Campaign and the schools located and set free those teachers who could make an adventure out of learning-to-teach. In short, the participants found themselves in a supportive school structure that could relax their constraints at work, delegate authority for the purpose of creative teaching and value the opportunity that could actualize teachers' creative potential. Under such circumstances, the participants were encouraged to produce the teaching tasks as part of their regular teaching responsibilities alongside their felt needs to create.

To conclude, this writer would argue that in order to foster teacher creativity at this level of context (i) the overly centralized and exam-oriented education system must be changed so as to give teachers more autonomy in class teaching; and (ii)

the schools should establish a supportive school structure that recognizes task creation as a teaching duty and makes it an achievable professional goal thereby meeting teachers' felt needs in the creative process.

#### **4. Critique of Cropley's stage approach to investigating teacher creativity**

In the present study, Cropley's framework of creativity stages (1997) is employed as the backbone for the Phase One and the Phase Two studies. The following sections intend to comment on the application of this stage approach to the study of teacher creativity in the local primary school settings.

##### **4.1 Multi-faceted framework to study the creative process**

With the application of Cropley's stages of creativity (1997), the process of creative teaching can be better understood. In each stage, certain cognitive processes are dominant (e.g., convergent thinking at Stage 2, divergent thinking at Stage 3). The intermediate product of a particular stage forms the main contents for processing at the subsequent stage (e.g., the new ideas illuminated at Stage 3 are the contents for verification at Stage 4). At the same time, progression of the creative process necessitates some psychosocial elements (e.g. empowerment at Stage 3, mutual trust among colleagues at Stage 5) and some positive feelings (e.g., interest & curiosity at Stage 1, satisfaction & pride at Stage 4). With the help of the model, the cognitive, psychosocial and affective factors that were contributive to the participants' creation could be elicited accordingly. Evidently, this model offers insights into fostering creative teaching by specifying what kind of activity should be emphasized at each stage to produce the desired configurations for the intermediate and final products.

This study followed Torrance's notion (1988) to choose "process" as a major focus and then used Cropley's stage model (1997) to describe how the teacher participants go through the creative teaching process. The present results and analysis showed that this general model of creativity could help to locate the kind of persons and environments that will facilitate the process and, subsequently, the kind of teaching products to be derived from successful operation of the process. Therefore, on the premise that creativity (Tarlow, 1996) and teaching (Britzman,

1991) are process-oriented, it is appropriate to draw parallels between creativity and creative teaching and apply Cropley's stage model as a guiding framework to explore teacher creativity.

#### 4.2 Demystifying the subconscious mental process

In Wallas's model for the process of creativity (1926), the inclusion of incubation (stage 2) followed by sudden illumination (stage 3) may imply that creative thinking is a subconscious mental process that cannot be directed by the would-be creator. This old model casts a somewhat magical quality on creativity. This would explain why some creative people do not seem to see the information and incubation stages while recounting their own experience in creativity.

Results from the present study indicated that the product of creative teaching was not resultant from subconscious processes, largely thought to be outside the control of the teachers. The Cropley's stage model showed that discrete creative intermediate products gradually evolved from attending to relevant information (stage 1), thinking convergently to formulate pupils' problems (stage 2) and thinking divergently to generate new ideas (stage 3). Accordingly, this version of the stage model is most likely to supersede the idea that creativity is a mysterious process of subconscious thinking by a more convincing belief that creativity is composed of some conscious cognitive processes of higher-order thinking.

#### 4.3 Emphasizing the need for societal actions to complete the creative process

In addition to mental processes, this stage model maintained that creativity required concrete actions to fulfil the socio-cultural requirements of the last two stages. The present study showed that such a claim was supported in the domain of teaching. When the context of creativity is considered, the present findings coincide with the views of Csikszentmihalyi (1988) and Nakamura & Csikszentmihalyi (2001) that there is a need to take account of both the communication of novelty to the field and the open validation of its effectiveness. The teachers' perceptions in this study indicated that the creators should have the practical ability (Sternberg, 1996) and did more than simply conceiving new ideas

which were then hidden behind the crowd. For this reason, the present participants communicated the new ideas to other teachers (Stage 5) and faced the challenges of validating them in the public domain (Stage 6).

The creative teachers must realize that creation is unconventional and may often be threatening to others. The tension between conventionality and creativity is so great that the acceptance of a newly created product necessitates appropriate strategies (Simonton, 1988). This writer maintained that persuasion and acceptance in the school context are important for creative teaching because school teaching is not a personal endeavour but a service made accountable to the public. A creative teacher must convince others of the worth of his/her new ideas. When creative teaching is communicated to and validated by the field, the creative products can then be assured of their creativeness and, at the same time, help other teachers to learn and apply similar creative tasks in class teaching.

All in all, the inclusion of societal actions in Crompton's model suits the study of creative teaching in the local settings. It reminds teachers that in order to be creative, teachers must think and act according to the contextual settings. Evidently, teachers' novel ideas that fail to undergo the complete creative process cannot qualify as creative tasks.

#### 4.4 Neglecting the potential creative teachers

Basically, the stage model of creativity intends to provide an analysis of the emergence of creative products. However, it is possible that the production sequence may stop in the middle of the course. This is in fact a potential limitation of applying Crompton's model into the study of creative teaching. In reality, the teacher may not possess sufficient information about the field to identify and formulate the problems, or that the opportunities for validation have yet to arise. Furthermore, the potential creative teachers may be rejected by the field whose knowledge often lags behind that of the creators. It is only in the ideal case that the whole process reaches the happy ending when the teachers are able to experience the satisfaction of creative achievement. Nevertheless, under Crompton's framework, those who cannot successfully go through all the creativity stages will probably be

regarded as non-creative. In addition, the potential creative teachers who fail to go through all the stages may soon be left out and become indistinguishable from the less creative ones.

Possibly, potential creators who failed to complete the creative process would revert to their former way of teaching. Because of the stigma and hurt caused by the failure, many would bury their creative interest and keep creative engagements at bay for a long time to come. In order to avoid such an unfavourable outcome in the application of this stage model, this writer would like to point out that while completion of Cropley's creativity stages results in success, an incomplete process is not necessarily a failure and hardly proves the lack of teacher creativity. The non-completion can take place due to inadequate time, the ignorance of others or some other contextual constraints. No matter when and why the potential creators stop in the process of creation, they can always come back, restart and make up for the loss by attending to the unachieved contexts.

#### 4.5 Revision of the six-stage model

Cropley (2001) enriched the present model (Cropley, 1997) by adding at the very beginning of the six-stage model the 'Preparation Stage'. The names and sequence of the original six stages remained unchanged. He argued (2001) that a human agent by nature acts with intention. Therefore, he brought into the Preparation stage an affective factor – dissatisfaction that induces a drive to identify and solve problems. As an intermediate product produced by this stage, problem awareness provides guidelines for the subsequent Information Stage to collect information with an intention to tackle the perceived problem.

The above amendment coincides with the present analysis, which also emphasizes the importance of establishing the intention to tackle the perceived problem at the outset of creative teaching. Though the older version of Cropley's model (1997) was applied, the present findings on the Information Stage also manifested teachers' dissatisfaction with the existing situations. Right from the start, the participants' awareness of the problems in class teaching strengthened their intention to take subsequent thoughts and actions to solve the problems. In

short, this study supports the adding of the Preparation Stage to precede the Information Stage detailed in the previous version. To conclude, the new model has not adversely affected the validity of the current study; on the contrary, it lends more weight to the present findings.

## **5. Chapter summary**

This chapter intends to make sense of the findings by considering their implications on the questions raised in this research. After recapping the major findings of the two phases of studies, suggestions to regard teacher creativity as a set of plots, principles and procedures which can be described, understood and learnt is put forward. Then Alexander's framework which provides the four aspects of change to produce creative practices is introduced before moving on to discuss the Phase One study that proposes creative teaching as a means to enhance teacher effectiveness and to meet the official advocacy of child-centred teaching. There, a critique of the overemphasis on child-centredness is presented. Then came the Phase Two discussion which highlights the implications of the coding and an explanation for the low level of teacher creativity. Following that are the ways to foster teacher creativity at the three levels of context. This chapter ends with a critique of the appropriateness for adopting Copley's stage approach for this study.

## CHAPTER SIX

### CONCLUSIONS AND RECOMMENDATIONS

#### 1. Retrospective evaluation

In retrospect, this writer finds special meanings in this study. He perceives the work itself as illustrative of Cropley's creativity stages. In many instances when he had to rely on creativity to do the work, he could see the functional worth of this framework and could also experience all the related emotions evolved in these stages. In this way, the writer also becomes a living proof of Cropley's creativity stages. This study indicates that teacher creativity is a complicated interplay between the teacher and the context. Such a practice of teaching is perceived to be culturally bound and contextually relative. The presence of creative teachers is a guiding influence on other field members in the development of teacher creativity. However, school heads, education officials and teachers themselves must establish the proper contexts in correct sequence and avoid adopting inappropriate measures or attitudes that would undermine the creative process. The following sections will present the implications of the present study for practice and research.

#### 2. Implications for practice

Creative teaching is perceived to be a positive, productive and sequential process that leads to effective teaching and learning. The implications for practice are as follows.

2.1 Teachers must strive to manifest more creativity in the classroom and, at the same time, undertake more inquiries on the issue with a view to achieving effective teaching and learning. The strong internality of the perceived causes identified in the present findings indicates that teachers play a crucial role in initiating and sustaining creative teaching while other external factors are necessary but not sufficient for it to occur. Although there are certain basic aspects of teaching that should preferably be left unchanged, this should not be an excuse for teachers to bar themselves from change. As a professional development, they should upgrade their expertise and knowledge in order to gain more insight into their teaching. By

taking these basic steps, they will become more competent in creative activities and coping with the increasingly sophisticated challenges occurring within the classroom.

2.2 Teachers need material as well as mental support for their creative teaching. When teacher creativity is considered as something that can be learnt and nurtured, establishing the contexts to help teachers acquire the related knowledge and skills and experience the emotions related to the creative process becomes a realistic goal shared by teacher educators, educational officials and head teachers.

2.3 Teacher education plays a decisive role in the development of teacher creativity. This study indicates that accumulating a diversity of relevant experience and knowledge by teachers would enhance their creativity. Therefore, it is recommended that the pre-service and in-service teacher education programmes should be structured in such a manner that enables teachers to gain better knowledge in a variety of areas and disciplines such that integration of this knowledge into their creative practices is possible. Furthermore, the strong inclination for causes to be internal indicates that intrinsic motivators like interest in teaching better, enjoyment in one's work and willingness to take risk are essential for creative teachers. Accordingly, eliciting such internal qualities should be regarded as one of the most important goals in teacher education.

### **3. Implications for research**

In Hong Kong, research on creative teaching is off to a promising start. Further investigation into this area of interest will undoubtedly contribute substantially to effective teaching and learning in the local context. The implications for research are detailed as follows:

3.1 Cropley's creativity stages model is recommended as an appropriate framework to explore teacher creativity. It helps to locate the basic 4Ps of creativity - process, person, place and product. Also it serves to portray the interactions among cognitive, affective and psychosocial elements. Above all, it goes well with the procedures for selecting creative teachers in school settings. However, one must

be aware that this model, which is a general theory on creativity, has now been applied to the domain of teaching. People who wish to follow suit or to transfer the results to a different context must make their own judgment as to how sensible the transfer is (Lincoln and Guba, 1985).

3.2 The present study focuses on the commonality of teachers' perceptions of creative teaching. Therefore, it takes little note of the participants' life experience as well as the subjects and class levels taught by them. However, it is argued that life experience can affect the development of creativity (Spence, 1985; Sternberg, 1996). Further explorations can determine the influences of a teacher's age, gender, life history, academic qualification, teaching experience and content specialties on his/her creative teaching. In addition, Winner (1982) suggested that there is variability of creative performance within a particular domain. Therefore, creative teaching performance may vary with the subjects and grade-levels taught. To date, there are few publications elucidating the effect of the above variables on teacher creativity. Further investigation will provide a closer look at the nature of creativity in the domain of teaching.

3.3 It would be interesting to study the supposedly less creative teachers' perceptions about creative teaching. A comparison of these two groups of teachers may expand our understanding of, for instance, the potential difficulties in engaging unmotivated teachers in creative teaching as well as the ways to motivate teachers on an average level of creativity to become more creative in their teaching.

**APPENDIX A**

**Verbal instructions given to teachers for conducting the 'peer check' in the Creative Teaching Campaign**

There is only one criterion in rating these creative teaching tasks: creativity. We realize that creativity doesn't exist in a vacuum, and to some extent creativity probably overlaps other criteria one might apply – aesthetic appeal, organization, richness of imagery, sophistication of expression, novelty of word choice, for example – but we ask you to rank the creative teaching tasks solely on the basis of your thoughtful-but-subjective opinions of their creativity. The point is, you are the expert, and you needn't defend your choices or articulate a definition of creativity. What creativity means to you can remain a mystery – what we want you to do is use that mysterious expert sense to rank order the teaching tasks for creativity. (*Instructions are adapted from John Baer's study, 1993, p.103*)

Please put the codes (AA, AB, AC ...) to the appropriate boxes below to indicate your rating of the creative teaching tasks just presented:

←	the	most		↔		the	least	creative	→
	creative								

**APPENDIX B**

**Letter inviting teacher participants for interview in the Phase Two study**

Dear Mr./Ms. \_\_\_\_\_

The 'Creative teaching campaign for primary teachers of Hong Kong' is drawing to a close. Thank you for your participation and once again, congratulations to you on your being selected as one of the outstanding creative teachers from 260 participants.

I am one of the four chief organizers of the project. In addition to the planning at the back stage, I have led several workshops and acted as the emcee in one of the three public seminars. We have shared our feelings and experiences on creative teaching on these occasions.

I have taught in Hong Kong primary schools for more than ten years. When I left the primary sector, I was the senior teacher responsible for school discipline and counseling. I am now the lecturer teaching Educational Psychology in the Hong Kong Institute of Education and I am also studying my doctoral degree in the University of Leicester with creative teaching as the theme of my final thesis. My areas of interest include the nature of creative teaching, the creative process and the perceptions of teachers on causes of such practices.

Now, I would be very grateful if you would allow me to have a fifty-minute interview with you to discuss your creative endeavour submitted for the campaign. Please complete the reply slip and return it to me via the self-stamped addressed envelope attached.

As our interview is for academic pursuit only, all interview data will be anonymous and kept confidential. Furthermore, I can share with you my analysis and results of investigation if you wish to do so. As a dedicated and creative teacher, please offer your help to make this inquiry successful.

Wish that the forthcoming interview would rejuvenate the joy and sense of achievement in your creative teaching.

Yours sincerely,

Chan Shing Kun

## Reply Slip

You are welcome to call me at 958x xxxx or my office assistant Miss Leung at 2948 xxxx to let me know your choices or any other opinions. The actual date and time for the interview will be informed to you over the phone followed by a letter of acknowledgement within three working days upon receiving your reply slip. If you think that a formal letter to your head teacher prior to my visit is preferable, please put a tick at the appropriate box in the reply slip.

Letter requesting you to check on the additional statements in the Phase Two

----- ✂ ----- ✂ ----- ✂ ----- ✂ ----- ✂ -----

**Reply Slip (Please return ASAP, thank you)** Name: Mr./Ms. \_\_\_\_\_

School: ABC Primary School

Telephone: \_\_\_\_\_

Location for the Interview Please fill the related number in the ( ) on the right column	My choices of the 50-minute interview and location
(1) the school I am teaching	<b>Choice One</b> Date: _____ Time: ____ : ____ to ____ : ____ am/ pm Location: ( ) or (please specify)
(2) your Institute in Taipo, Room D2-2F-14	<b>Choice Two</b> Date: _____ Time: ____ : ____ to ____ : ____ am/ pm Location: ( ) or (please specify)
	<b>Choice Three</b> Date: _____ Time: ____ : ____ to ____ : ____ am/ pm Location: ( ) or (please specify)

Please put a '✓' in the appropriate box below :

Letter to school head needed  ; Letter to school head NOT needed

Date : \_\_\_\_\_

Signature: \_\_\_\_\_

**APPENDIX C**

**Letter requesting member check on the attributional statements in the Phase Two  
study**

Date: \_\_\_\_\_

Dear Mr./Ms. \_\_\_\_\_,

Attached please find a copy of the statements extracted and transcribed from the tape-recording of our previous interview. The English translation of the statements is also attached for your reference.

You are requested to check the statements and the translation and verify that they correctly represent your thoughts. They will be rewritten according to your suggestions and comments.

Please amend the statements wherever appropriate OR tick beside the statements to indicate that you agree with them and the translation. I should be grateful if you could mail your return to me within two weeks. A stamped envelope is enclosed herewith for such use. Should you wish to discuss the matter with me, you are welcome to call me (958x xxxx).

Once again, thank you very much for your assistance in my EdD study.

Yours sincerely,

David

## APPENDIX D

**Practical examples of coding attributions on personnel and causal dimensions**

The following sections will provide typical examples of common attributional statements made by the selected teachers on the three causal dimensions. The personnel coding and the explanation of dimension coding are given.

### **Stable-unstable Dimension**

Example 1:

*'I think my 24 years of teaching is one of the prerequisites because I can understand my pupils' needs more thoroughly with this experience.' (Interview 22)*

Speaker / Target / Agent – Stable [1]

The cause (understanding pupils' needs more thoroughly) is the speaker's self-perception of her teaching experience. It is regarded by the speaker to have had a relatively permanent effect upon her and is therefore likely to have ongoing consequences (as one of the prerequisites) for future creative teaching events.

Example 2:

*'Learning a second language like English is a struggle for most children since most parents are not good at this subject.' (Interview 05)*

Pupils / Target; Parents / Agent – Stable [1]

The cause (parents not being good at English) reflects the perception that most parents' level of English is less than desirable and that does not usually change in the short term, implying this problem will have ongoing consequences for children's learning.

Example 3:

*'The nearby community centre has just run a similar programme much better than what we have done. We'd like to adopt their ideas because this fresh input may give impetus to changing the way of teaching and learning.' (Interview 04)*

Speaker / Target; Outside educational body / Agent - Unstable [0]

The cause (the fresh input giving impetus to the change) is an isolated incident and is unlikely to recur. Moreover, there is also no evidence to suggest that the speaker believes the cause is likely to apply to future creative events.

Example 4:

*'This ending is exciting (for the pupils) because it can elicit a little surprise from pupils.' (Interview 04)*

Pupils / Target; Speaker / Agent - Stable [1]

The cause describes the speaker's intention to establish originality of the creative task. Although the outcome (an exciting ending) may be a transient experience for the pupils who have just finished the task, the speaker perceives that the cause (eliciting surprise) is attributable to the task design and such occurrence is likely to take place again for many other pupils who have not tried the creative task before.

### **Global – specific Dimension**

Example 1:

*'We can inspire creativity in our pupils because of our ability to act as good role models for our pupils to follow.' (Interview 08)*

Speaker / Target / Agent - Global [1]

As the speaker uses 'we' in this attribution without mentioning or identifying the others, the convention is to code the speaker only (Munton et al., 1999). The cause (acting as good role models for pupils to follow) is an acquired disposition of the speaker and is likely to have influences on teaching events beyond the one identified in the attribution being coded.

Example 2:

*'I often make adjustment in teaching to cater for my pupils' needs because I must teach according to the school-based curriculum.' (Interview 08)*

Speaker / Target / Agent - Global [1]

The cause (to teach according to the school-based curriculum) is a general school characteristic. It can reasonably be assumed to have significant impact on other teaching events that follow.

Example 3:

*'I pick this task activity because I am trying to elicit more responses from my pupils.' (Interview 07)*

Speaker / Target / Agent - Uncertain [2]

The cause (trying to elicit more pupils' responses) may be global when this

teaching strategy is applied by the speaker to situations other than the one mentioned in this attribution. However, it is not entirely clear whether this cause will have ongoing consequences for the outcome (her selection of a specific task activity). Therefore, the cause is coded 'uncertain'.

Example 4:

'I give ample examples to my colleagues because I want to prove to them my expertise in doing this creative task.' (Interview 09)

Speaker / Target / Agent – Specific [0]

Although the cause of this attribution can be interpreted as referring to the speaker's competence and thus having a potential influence on a variety of creative tasks, the label "*this* creative task" at the end of the causal statement eliminates the option of coding this attribution 'global'.

### Internal-external Dimension

Example 1:

*'(In my design...) Music forms a major component of the task content since I am a music major and thus more knowledgeable in that area.' (Interview 07)*

Speaker / Target / Agent – Internal [1]

The cause in this attribution is the speaker's acquired characteristic (teacher knowledge) and is therefore internal to the speaker.

Example 2:

*'The pupils find it boring to draw in this manner. This kind of learning process (of the pupils) must be renewed because they like to learn through games and interesting activities.' (Interview 10)*

Pupils / Target / Agent – External [0]

The cause (the pupils' preference for learning) originates from within the pupils, not the speaker. Clearly, it is coded external.

Example 3:

*'I share my experience with my math colleagues because we are asked to have*

*these routine meetings every week.* (Interview 11)

Speaker / Target / Agent – External [0]

The speaker uses the word 'we' in this cause to refer to the teaching team consisting of her and the math colleagues. It is an example of shared causality. However, despite the speaker's involvement in the cause, the cause is perceived as an assigned school duty (a school attribute) and is clearly located external to the speaker.

Example 4:

*'Creative teachers always want to teach effectively because we believe that our job satisfaction largely derives from pupils' success.'* (Interview 14)

Speaker / Target / Agent – Internal [1]

Although the pupils' success (the source of job satisfaction) is external to the agent, this cause has to be coded internal because it represents the speaker's belief in teaching (a personality characteristic).

**APPENDIX E**

**Coding attributions on content – themes and categories**

The following examples intend to illustrate the themes and categories of content coding reached as a result of the present inquiry. There are altogether six themes and their respective categories are listed accordingly.

#### Theme 1 - Creator's personal attributes

This theme represents the teacher participants' personal attributes in terms of their work habits, intentions (excluding those in related to task design), beliefs, characters, attitudes and self-perceptions. For examples:

1. ...because I'd be pleased to see my pupils like to learn. (attitude)
2. ...because helping them to learn is our principal source of happiness. (belief)
3. ...because I like to face challenges. (character)
4. ...because I understand that our pupils will feel bored when we teach without variations. (self-perception)
5. ...because we always adjust our teaching plan to take account of what they have learnt. (work habit)
6. ...because I want my colleagues to access the material and guidelines easily. (intention)

#### Theme 2 - Creator's teacher knowledge

This theme represents the teacher participants' teacher knowledge in terms of their teaching experience, task-related skill, success in related task and immediate input to stimulate creation. For examples:

1. Such a long period of classroom practice is important because it stocks up my bag of tricks to design the creative tasks. (teaching experience)
2. ...because I have to convince other teachers who have different viewpoints. (task-related skill)
3. ...because I have already had the bits and pieces of the creative task. (success in related task)
4. The dance course has given me the hint because I find that the combination of dance movement with verse speaking is applicable to classroom teaching. (immediate input to stimulate creation)

### **Theme 3 – Creator’s task design**

This theme represents the participants’ intentions of designing the creative tasks. In this inquiry on creative practices, it is appropriate to establish a separate theme such that the participants’ intentions to design the tasks are distinguishable from other intentions not directly related to the task creation. This new theme helps to explore the criteria of task validation that include the originality perceived by pupils or teachers, practicality and social worth of the creative tasks. For examples:

1. ...because it can elicit a little surprise from pupils. (originality)
2. ...because it is a time-saver. (practicality)
3. ...because it can cater for the children's varying abilities. (social worth)
4. ...because it indicates that the task can arouse effective learning. (social worth)

### **Theme 4 - School characteristics**

This theme represents the characteristics of the participants’ schools in terms of the constraints at work, school tradition and the assigned duties. For examples:

1. ...because I am always busy with other school work ... (constraints at work)
2. ...because I am the panel chairperson and I am obliged to take a leadership role in curriculum planning. (assigned duties)
3. ...because we must ask for our school head’s approval to do new things. (school tradition)

### **Theme 5 – Pupils’ learning characteristics**

This theme represents the characteristics of pupils’ learning in terms of the context, content, process and outcome of learning. For examples:

1. My original worksheet is too old-fashioned and modification is necessary because the pupils show no interest in its content. (content of learning)
2. ...because the pupils will feel happier when they do something voluntarily. (context of learning)
3. ...because the pupils will learn these topics better when opportunity for hands-on experience is given. (process of learning)
4. ...because they can memorize all the text material after the task activity. (outcome of learning)

**Theme 6 – Outside school attributes**

This theme represents the influences found outside the participants' schools. They include the support of parents, official advocacy and the external impetus to arousing the participants' immediate interest in creating the task. For examples:

1. ...because the parents can give us some informative feedback on the task activity. (support of parents)
2. ...because it is in fact a target prescribed in the official syllabus. (official advocacy)
3. I am compelled to design this task because I must meet the assessment requirement. (external impetus)

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